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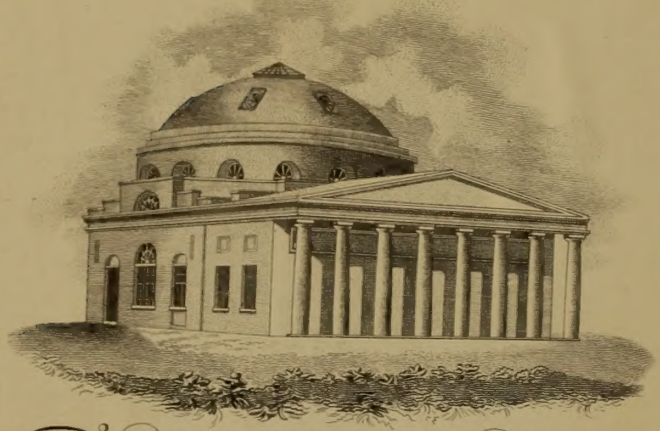

University of Maryland

University of Maryland Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physic during the years 1813-1887. The individual dissertations were bound together during the 1940's. The original tables of contents for the bound volumes contained multiple errors in authors' names, titles, and/or years. To address these errors, an additional "Corrected Table of Contents" has been inserted at the beginning of each volume.

The project team who investigated and corrected the tables of contents were Richard J. Behles, Historical Librarian/Preservation Officer; María Milagros Pinkas, Metadata Management Librarian; Angela Cochrane and Carol Harling-Henry, Resources Division; Sarah Hovde, Abra Schnur and Megan Wolff, Services Division.

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(CORRECTED TABLE OF CONTENTS)

UNIVERSITY OF MARYLAND

THESES

1852 (b)

| Author | Title | Notes |
|---|---|---|
| Moores, Samuel Lee, Jr. | Intermittent Fever | (p. 1-8)[1] |
| McCleary, John | Bilious Remittent Fever (faded ink) | (p. 24-35)[2] |
| Moores, Samuel Lee, Jr. | Intermittent Fever | (p. 9-36)[3] |
| McCleary, John | Bilious Remittent Fever | (Title page, p. 1-11)[4] |
| Mumford, D.E. | Remittent Fever | |
| Minor, John H. | Prolapsus Uteri | |
| Marshall, Edward W. | Delerium Suppression Potus | |
| Linthicum, A.S. | Diversity of Facial Expression | |
| Thomas, William Montgomery | Etiology | |
| Smoot, Andrew Jackson | A Clinical Report of Six Cases of Disease | |

[1] Title and pages 1-8. Pages 9-36 are found later in this volume. (Moore's thesis is interrupted by a segment of McCleary's thesis.)

[2] Pages 24-35 are inserted into the middle of Moore's thesis (see above). Title and pages 1-11 are found following the second segment of Moore's thesis.

[3] Pages 9-36. Title and pages 1-8 are found at the beginning of this volume.

[4] Title and pages 1-11. Pages 24-35 are found earlier in this volume, inserted in into Moore's thesis. Pages 12-23 were not located in this volume.

HSHSL 2012 for the UM Digital Archive. Sources consulted for corrections: Original Dissertation; University of Maryland Medical Faculty, Matriculation List, 1821-1851; Cordell, Eugene F. "University of Maryland, 1807-1907" (New York : The Lewis Publishing Company, 1907), Volume 2.

| Author | Title | Notes |
|---|---|---|
| Willis, William L. | Asthma | |
| Rider, Thomas William Perry | Scarlatina | |
| Borgman, Charles John | Iteus | (faded ink) |
| Claytor, William Q. | Six Cases of Disease | |
| Carr, R. Wilson | A Clinical Report of Cases | |
| Crook, James | Diagnosis and Treatment of Fractures | |
| Ghiselin, James T. | Physical Examination of the Heart | |
| Emory, Augustine Walsh | The Circulation of the Blood | |
| Goldsborough, Henry T. | Dysentery | |
| Beard, John Wesley | Ausculation of the Lungs | |
| Benson, George Washington | Inflammation | |
| Dent, Walter B. | Clinical Report of Six Cases | |
| Nowland, Edward F. | Inflammation | (partially faded ink) |
| Dickson, John | General Anatomy | |
| Griffith, Edward J. | Cynanche Trachealis | |

HSHSL 2012 for the UM Digital Archive. Sources consulted for corrections: Original Dissertation; University of Maryland Medical Faculty, Matriculation List, 1821-1851; Cordell, Eugene F. "University of Maryland, 1807-1907" (New York : The Lewis Publishing Company, 1907), Volume 2.

UNIVERSITY OF MARYLAND

THESES

1852(b)

| | | |
|---|---|---|
| Moores, Samuel Lee, Jr. | Intermittent Fever | 36p. |
| McCleary, John | Bilious Remittent Fever | 34p. |
| ~~Mamford~~ Mumford, D. E. | Remittent Fever | 27p. |
| Minor, John H. | Prolapsus Uteri | 24p. |
| Marshall, Edward W. | Delerium Suppression Potus | 27p. |
| Linthicum, A. ~~L.~~ S. | Diversity of Facial Expression | 34p. |
| Thomas, ~~Wm.~~ William Montgomery | Etiology | 27p. |
| ~~Snort~~ Smoot, Andrew Jackson | A Clinical Report of Six Cases of Disease | 22p. |
| Willis, ~~Wm.~~ William L. | Asthma | 24p. |
| ~~Perry~~ Rider, Thomas ~~Wm.~~ William Perry | Scarlatina | 54 58p. |
| Borgman, Charles John | Iteus | 32p. |
| Clayton, William Q. | Six Cases of Disease | 28p. |
| Carr, R. Wilson | A Clinical Report of Cases | 40p. |
| ~~Cook~~ Crook, James | Diagnosis and Treatment of Fractures | 24p. |
| Ghiselin, ~~T. Jr.~~ James T. | Physical Examination of the Heart | 19p. |
| ~~Walsh~~ Emory, Augustine Walsh | The Circulation of the Blood | 38p. |
| Goldsborough, Henry T. | Dysentery | 28 26p. |
| Beard, John Wesley | Ausculation of the Lungs | 27p. |
| Benson, George Washington | Inflammation | 36p. |
| Dent, ~~Wm.~~ Walter B. | Clinical Report of Six Cases | 38 36p. |
| Nowland, Edward F. | Inflammation | 26p. |

40

| | | |
|---|---|---|
| Dickson, John | General Anatomy | 46p. |
| Griffith, Edward J. | Cynanche Trachealis | 29 2[illegible]p. |

47

An 6

Inaugural Dissertation

On

Intermittent Fever

Submitted for Examination
To the

Provost Regents and Faculty of Medicine
Of The

University of Maryland
For the
Degree of Doctor of Medicine
By
Samuel Lee Moore Jr
Of Maryland
1852

18900

# Intermittent Fever.

To investigate the nature of those agents which derange the economy of the human system, and discover the conexion with the diseases and distress of which they are productive, is undoubtedly one of the most exalted duties that man is called upon to perform. There are so many disorders to which the human system is liable, under such varied forms, and apparently attributable to so many causes, that notwithstanding the exertions of the large number of ingenious individuals who have laboured in the field of medical philosophy, we have frequently to attack a disease without knowing its vulnerable point. No Physician of the present day, we presume would be disposed to question

the propriety of the maxim which teaches us to remove the cause, as the first step in the cure of a disease -- and he who succeeds in enlarging or correcting our Pathological knowledge, is entitled to no small praise. This century so far as it has elapsed forms a brilliant era in the history of medical science. In the wide range of a number of years, which exact history claims as her own, we here and there may mark the recorded labours of great and renowned genius, which shine with redoubled splendour amid the surrounding darkness. It was however reserved for the present era, by an unanimity of co operation unexampled in past ages, to place medical science upon firm bases of correct observation, critical research, and strict Philosophical deduction to discard all idle speculation and vain

hypothesis, and by endowing it with the attributes of an exact science, to render utterly inapplicable to it. at no very distant period, the opprobious epithet of ars conjecturalis. This prosperous state of science, brightened by such anticipations of prospective improvement, may be ascribed mainly to the splendid, useful, and imperishable accesions which have been afforded to it by the genius and industry of Andral, Louis, Laennec and a number of others. The impulse which their researches and examples have given to the medical inquiries of the present age, cannot but be attended with the happiest results, when the present system of Physiological medicine shall have become better understood and more intensively adopted: Notwithstanding the difficulties, which Physiological

medicine has to contend with, arising from the inveterate habits, and accumulated prejudices of centuries, yet it nevertheless has made steady and rapid advances, and we are almost daily called upon to present to our readers brief notices of some of the more important works expressly devoted to this subject, which are crowding upon us with irresistible claims to attention. I will now enter upon the subject which I have chosen for my discourse, of which the trivial English name is Ague, and which is called by nosologist Intermittent Fever. The title of Intermittent is applied to that kind of fever which consists of a succession of paroxysms, between each of which there is a distinct and perfect intermission from febrile symptoms, or an apyrexial period. Intermittents are readily

distinguished from every other form of idiopathic fever by their occurrence in paroxysms, each of which may be considered as an epitome of a febrile disease, exhibiting in the course of about eight all the stages of fever, – its rise, progress, crisis, and termination in the recovery of health. Different names have been applied to this fever, according to the length of time observed between the periods of its return. When it commences within the space of twenty four hours it is called a Quotidian, when it returns every other day, or there is a space of forty eight hours, between its attacks, it is called Tertian, and when it attends on the first and fourth day, with an interval of seventy-two hours it is named a Quartan. That under the Tertian type is most apt to prevail in the Spring, and indeed is

the most frequent form of the disease. The Quartan is the most obstinate, and dangerous, being chiefly prevalent in Autumn. The Quotidian is more likely than the others to assume the continued type. Several irregular types of Intermittent Fever, has been taken notice of by authors, such as the double Tertian, having a paroxysm every day with the alternate paroxysms similar to one another. The double Tertian with two paroxysms on one day, another on the second, but none on the third. And the double Quartan with two paroxysms on the first day, none on the second and third, and two again on the fourth. The double Quartan, with a paroxysm on the first day another on the second, but none on the third. The triple Quartan, with a paroxysm every day, every fourth paroxysm being similar.

In the course of the disease it is frequently observed that the type changes. Tertians and Quartans into Quotidians, Quotidians into Remittents. Under more favourable circumstances, the remittent shows the character of an Intermittent, and generally speaking, they change into a type of less frequent repetition, indicates an abatement in the severity of the disease. Physicians have remarked, that the Tertian type of fever has its invasion in the fore noon, the Quartan in the afternoon, and the Quotidian in the morning. The Quartans, which has the longest intervals, has the longest, and most violent cold stage, but upon the whole the shortest paroxysms. The hot fit of the Tertian is comparatively the longest. The Quotidian with the shortest interval has at the same time, the longest paroxysm.

This was once a formidable disease, however simple it may appear to be at present. In Spain it was customary to count its duration not by days and weeks, but by months and years. Chronic diseases were formerly the frequent consequences it, Dropsies, affection of the Spleen and a numbr of others. It is under the influence of the Atmosphere; a salivation has brought it on, but the most frequent cause is Malaria. It seems to be prelly generally acknowledged, that marsh miasmata, or the effluvia arising from stagnant water, or marshy ground, when acted upon by heat, are the most frequent exciting causes of this fever. In marshes, the putrefaction of both veget able and animal matter is always going foward, it is to be presumed, and hence it has generally been conjectured, that vegetable or animal putrefaction imparted a peculiar

emetic should be given, assisted by warm water or chamomile tea.

There is a diversity of opinion in regard to bloodletting in this disease. In a majority of cases, it is not well borne; and, in some cases, it is positively injurious. It is very rarely employed in the part of the country where I resided, (and where this disease is very prevalent every autumn) from the fact, that it is very seldom that it can be employed without great risk to the patient; the indications can generally be fulfilled by other depleting measures more safely.

There are some cases, however, in which bloodletting, both general and local, are demanded; these are cases, in which there is a vigorous condition of system; the patient plethoric, great strength of pulse, violent pain in the head and back, and great distress about the epigastrium; in these bleeding, generally, must be [illegible] measures;

have a most happy effect, in allaying all
of the violent symptoms. Subsequent bleeding
may be resorted to if the symptoms require it,
and the system will bear it; but should be
used more cautiously, taking care not to carry
it too far; the amount taken should be
regulated by the effect upon the pulse and
symptoms. The object of bleeding cannot
cut the disease short, but is employed to
prevent local inflammation; and when that
is threatened, it is our most efficient means
of prevention.

After bleeding, or when that is not required,
a cathartic should be given, and the best
is unquestionably, mercury in the form of one
of its preparations, Calomel is the best one,
as it tends to unload the portal circle, and
increase the biliary secretion which is generally
deficient, and empty the bowels of offending
matter — from ten to twenty grains should
[illegible] either alone, followed in six or eight

bowels by salts, or castor oil, or magnesia, or combined with equal parts of jalap, rhubarb, or some other aperient, which generally produces several free bilious evacuations; after which, if there is a well marked remission, approaching nearly an intermission, and no gastric or cerebral derangement, Sulph. quinine should be given in doses, of from one to two grains every two hours, which will generally prevent the return of the paroxysm. If, however, the remission is not clearly marked, and there is gastric irritability and pain in the head, Quinine is contraindicated. Diaphoretics should then be given; and the best is probably the effervescing draught, composed of lemon juice and carbonate or bicarbonate of potassa, which is very grateful to the patient, and tends to allay irritability of stomach, and generally brings about a remission. The intermissions are usually simply [illegible] when there is no gastric distress or this.

alone or combined with the effervescing draught. Landanum may be combined with the effervescing draught; and it often assists to allay the irritability of stomach. There are many other diaphoretics xxx employed with good effects sometimes; but I think the antimonials, when there is no irritability of stomach, and the effervescing draught when there is, are the most useful and highly recommended. When the skin is hot and dry, sponging the surface with cold water affords great relief. In cases of children, the warm bath is highly useful. So soon as a remission is clearly observed approaching the character of an intermission, Sulph of Quinine should be given as before recommended, from ten to twenty grains during the remission, which will generally prevent the return of the exacerbation. The quinine should be continued so as to prevent another paroxysm.

when the exacerbations are prevented by this means, and with a proper regard to the regimen of the patient, it will generally be all the treatment required.

The disease, when it shows a disposition to resist these measures, requires additional treatment. After the eighth or ninth day, when the disease has not yielded, and shows a disposition to assume the typhoid character, or when from the onset it is of a threatening or inflammatory character, which cannot be subdued by the lancet and other depletory measures, Calomel, or one of the preparations of mercury, should be given, assisted by inunction, if necessary, until salivation is produced; it should then be discontinued, when the patient is under the influence of mercury, he may be considered as in a fair way of recovery: for very few cases are lost after getting the system under the influence of mercury. I am aware that some writers object

to this plan of treatment, that is, salivation, but it appears to me, from what I have seen of the disease, and read of it, it is, in the cases I have mentioned, highly useful; especially, when there is threatened local inflammation, or where it already exists.

In what I have said, as to the administration of sulph. Quinine, I do not wish to be understood as restricting its use to those cases marked by clear remission, approaching to the character of intermission; for I have seen its administration in cases, without any regard to remission, used with marked benefit, unattended with any complement affixed. The testimony, in its favour, in these cases, is abundant; and even if it conflicts with the experience in some of the profession, and its [illegible] [illegible] should not be neglected,

It is a [illegible] [illegible] disease, that the malignant form, when [illegible] [illegible]

pernicious fever, in which, it is often the only mean there is to save the patient. When there has been a very violent paroxysm, from which the patient has been rescued with great difficulty, it should be given very freely to prevent the return of the paroxysm; as it is the only means to save the life of the patient.

The disease, after continuing from ten to fourteen days, without any favorable change, is apt to assume, what is called the [illegible] character of bilious remittent fever. Here, if the patient has not been salivated, it is recommended to give mercury until the gums are slightly tender. If diarrhoea should exist, the calomel should be combined with opium and Ipecacuanha, [illegible] grain of calomel, with one grain [illegible] of opium and Ipecacuanha each, given every hour or two till the gums are slightly affected. If the disease is of the paroxysmal

character, Quinine should be given: it is highly useful also as a tonic.

Oil of Turpentine is highly useful, given in doses, of from ten to twenty drops, every two or three hours, after ptyalism has been produced, and no favorable change has been observed.

Should the abdomen be tender, leeches should be applied over the tender spot; and if there is diarrhea, and the abdomen is tympanitic, a warm poultice should be applied.

Frequently at this period of the disease, the system sinks into a prostrate condition, requiring stimulants to sustain the powers of life. Infusion of Serpentaria is a mild stimulant, and frequently answers very well in those cases, where there is not a great deal of debility. In cases, where the debility is very great, the most powerful stimulants are

necessary; such as ammonia, brandy, &c., and external stimulant should be used mustard, oil of turpentine, hot bath &c.
The great gastric distress, that frequently attend this disease, requires special treatment when it is dependent upon irritating substances in the stomach—it is frequently relieved by a gentle emetic of Ipecacuanha, warm water, or chamomile tea. When the irritation exists in the coats of the stomach, mustard poultice should be applied, or powdered spices, or a blister to the epigastrium, and small doses of opium internally. The effervescing draught is highly recommended as a means of allaying vomiting; acetate of lead has proved useful for the same purpose, in grain doses every hour.
Minute doses of calomel acts admirably as a stimulus in relieving vomiting.
When the stomach is inflamed, leeches should be applied to the epigastrium.

when there is great cerebral distress, evinced by great pain in the head, in the early stage of the disease, cold applications, such as [illegible], Water poured upon the head, from a height, affords sometimes, the most prompt relief; leeches to the temples and nape of the neck are very valuable, and should not be neglected; and finally, if all these means fail, and there is coma or delirium, the head should be shaved and a blister applied.

Watchfulness and other nervous symptoms may be relieved by the nervous stimulants, and opiates.

The diet of the patient should be strictly attended to, in the first part of the disease the mildest and gentlest should only be allowed, and in a liquid form; such as rice water, thin gruel, and panada, in small quantities, and numerous other articles of the same class.

The drinks should be cool and acidulated to [illegible] allay the thirst; which is generally very great. In the more advanced stages of

the disease; the more stimulating articles are often necessary; such as beef tea, milk punch, and the animal broths.

During convalescence, the diet should be regulated, commencing with the most simple, increasing to the more nutritious, as the digestion of the patient increases. The state of the skin frequently requires the attention of the physician. When the appetite is languid, and there is a laxity of system, with night sweats, it is often corrected by aromatic sulphuric acid, given in doses of from five to ten drops, three times a day, increasing it gradually. Tonics should be given; such as Sulphate of Quinine Carb. of Iron, and the vegetable bitters.

A useful combination, when the patient is [illegible] quinine, as as follows; Carb. [illegible] ʒij, Cinnamon ℥j, Brandy ℥j; dose, tea spoonful 3 times a day.

In relation to the prophylactic measures

in this disease, the most effectual means

are, to avoid exposure to the hot sun during

the day, & the night air, during the autumn

season; to avoid all fatigue of body, and

excesses in eating, and one, which is frequently

employed with great advantage in various mala-

rious districts, is, to keep the system moderately

under the influence of Sulph Quinine.

Such is the general treatment of this disease;

but it is by no means complete, or perfect.

It is a disease, which presents so many complica-

tions, and characters, in different constitutions,

that it requires an experience, and discrimina-

tion, only acquired by practice, to treat successfully.

Permit me, gentlemen of the faculty, to

express to you my gratitude, for the many lessons

of instruction received at your hands; and for

the various acts of personal kindness, extended

towards me, I shall ever feel deeply grateful.

John McCurry.

of Maryland.

is intensely hot; the eyes are suffused and of a watery, yellowish hue, or very often dull and languid. The pain in the head is greatly increased, and of a lancing and throbbing kind; and frequently delirium; thirst very great, [illegible] great distress about the [illegible] almost insupportable; the respiration is quick and laboured; the pain in the back and extremities are often very severe; the pulse is frequent, quick, and tense, sometimes almost imperceptible, and sometimes irregular; the nausea and vomiting are sometimes very distressing, the matter vomited being of a green, yellow or blackish brown colour; bowels generally costive, or if open, discharging a thin watery fluid with [illegible] and griping. The evacuations, if procured by medicine, are [illegible] in quantity, dark, slimy, and offensive.

ing exacerbation, there is less heat & restlessness; pulse less quick and frequent; gastric distress not so great; less pain about the epigastrium; pains in the head, back, and extremities greatly less; the paroxysm is shorter in duration; the skin, as the fever declines, becomes more moist and soft; the tongue begins to clean off its coat; the remissions are longer and more distinct, until, at length, a marked intermission occurs, when the patient may be considered as convalescing.

Such, are some of the symptoms and phenomena, of the two forms of bilious remittent fever; but the description is by no means complete: for no disease, probably, presents a greater array or variety of symptoms than this.

There is another form of the disease which is treated by some authors as a distinct disease, namely: Congestive or Pernicious fever; [illegible] [illegible] [illegible] disease [illegible] [illegible]

nant form. I have seen the disease in the western States. It sometimes commences as the more simple form; but after one or two paroxysms, assumes the malignant character, hence, we are always advised to treat every case of bilious remittent fever promptly, for fear, that it may assume the congestive form.

The duration of bilious remittent fever varies according to the state of the system and the violence of the attack. The average duration may be stated to be from twelve to fourteen days. It sometimes ceases as early as the fifth or sixth day, frequently about the eighth or ninth day. It is sometimes however of very protracted duration, after the twelfth or fifteenth day, assuming what is called the typhoid stage of bilious remittent fever. The pulse is small and frequent; the tongue red and dry; sordes collect upon the lips and teeth; the stomach is no longer irritable; and the

miasmata to be essential, seems to be supported by the most abundant proofs. And the few cases, that have been adduced to prove that miasmata is not essential, cannot, but be looked upon with suspicion; for if all the circumstances, connected with the cases mentioned, were known, they might be reconciled to the rule.

Bilious remittent fever results from the same cause as intermittent fever; the former occurs, as is supposed, when there is a more intense operation of the morbific cause or peculiar poison; and that the more violent or concentrated the cause, the more remote fever, the intermittent fever, or the [illegible] remissions; and as a proof of this fact, persons who are residents of malarious distrit[illegible], who have become acclimated, [illegible] with intermittent [illegible] [illegible] those, not long resident in [illegible] district, are [illegible] [illegible]

Another proof of the disease being dependent on the same cause, is that the [illegible] fever to pass into the intermittent form, and intermittent is however liable to assume the remittent form.

The facts, presented by authors, referring the cause of bilious remittent fever to be [illegible] drinking marsh water, are numerous and well authenticated, and I think, no doubt, should exist as a [illegible].

Bilious remittent fever differs from other fevers, but something peculiar in the operation of its cause; what that peculiarity is has not been determined. Post mortem examination has not afforded us much aid upon the subject. The lesions found in this disease, are found in other [illegible] diseases. None are peculiar to this disease, except the colour of the liver and this fact has given ground for a spe- [illegible] theory; but which, I believe,

are not very satisfactory to the profession.
The liver, spleen, stomach, and brain seem to be the organs principally affected; more generally the stomach and liver are the principal seats of the disease. Some instances occur, in which, the stomach is the organ principally affected; in others, the liver is the seat of the disease; and, again, the disease expends its whole force upon the brain.

The diagnosis of bilious remittent fever is a little difficult under some circumstances; but, as a general thing, it is not difficult of diagnosis. It may be confounded sometimes, with Enteric or Typhoid fever, or Yellow fever; but an acquaintance, with the [illegible] symptoms of these diseases, will prevent any mistake in this respect. There are some inflammations that we might mistake for this disease especially, when they are associated with

derangement of the functions of the liver be-
ing, the paroxysmal character or the inter-
mittent fever will generally enable us to
settle the difficulty.

There are certain prominent symptoms in-
variably present, which will lead us to
an accurate diagnosis. These are
gastric disturbance; sense of weight and
distress about the epigastrium, pain in
the head, back, and limbs; and the
great muscular debility and weariness,
manifested by the patient; high color
of the urine; and the yellow skin.

The district of country where the disease
presents itself; and when it is known
that the patient has been exposed to
miasmatic influences, in addition the
symptoms will generally enable us to recog-
nise the disease without difficulty.

The prognosis is generally favor-
able if judiciously treated, the milder form,

always end in recovery; and the severe and inflammatory form of the disease, if properly and energetically treated, generally terminates favorably. The prognosis, is more favorable, generally, in those cases, where the patient is a resident of a malarious district, and having had a previous attack continues to reside in the same region; than in strangers and the unacclimated; especially if the latter are dissipated, and from their occupation are subject to exposure and fatigue. The disease of some years is greatly more fatal than in others, and, of course, the prognosis is more unfavorable. The congestive form of the disease is more unfavorable but, if vigorously treated, from the outset many cases are brought to a happy issue. The favorable symptoms are mildness and relative shortness of the paroxysms; a greater or longer remission; with free perspiration, and an

inclination to sleep, the bowels become regular and healthy in their actions,
and improvement in the features.
Some of the unfavorable symptoms are
constant oozing of the surface, delirium,
Coma, pulse very frequent and small,
hiccough, subsultus tendinum, a position
to slip down in the bed; hemorrhage
from the bowels, & involuntary evacuations from
the bowels.
Treatment. In the mild stage it is not
often that we see the Case, and it is
not often that any treatment is required.
If it is unusually prolonged, the diet
should be given; the patient should be
warmly covered; hot applications externally
such as, hot bricks, bottles filled with
ice or water, is generally all that is required.
If there is great prostration, as
is the case in the congestive form, the
... stimulants are necess-

any, in order to bring on vomiting.

The first treatment used, in this disease, some years since, was, to give in the first place, after the cold stage, an emetic, & it is still adhered to by some practitioners, in some parts of the country; but this practice has fallen into disuse since the pathology of the disease is better understood. The stomach is usually very irritable, and the emetic very often increases it, and not unfrequently, inflicts severe suffering. There is a certain condition of the stomach when an emetic acts beneficially, and that is, when there is frequent retching, and vomiting of a small quantity of acid matter, or bile, with an irritability of the coat of the stomach, and dependant upon offending matter in the stomach. In this case, an emetic of ipecac

quality to the watery particles of the effluvia arising from thence. We are not acquainted with all the circumstances which are requisite to render Malaria productive of Intermittents. According to observations made in sunny districts, it has been ascertained that Malaria, when much diluted with aqueous exhalations, as in Summers, when an unusual quanity of rain has fallen, are nearly inert, but when arising from stagnant waters of a concentrated foulness, in consequence of great drought and heat in the latter end of summers, and the early part of Autumn, they act with great violence and malignancy. In admitting the powers of marsh effluvia to produce Intermittents, we ought not at the same time to look on them as their universal cause, since it is found that persons residing constantly in the most healthy parts of Cities and countries, and far remote from marshes, are sometimes

attacked by them. Seasons have great influence ~~and~~ but climate more so. The remittent type occurs almost exclusively in hot countries, but to form an adequate idea of the extent, to which the symptoms of Ague can be modified it will be necessary to consult the works of Drs Cleghorn and Lind, authors of the highest repute on Intermittents. A watery, poor diet, great fatigue, long watching, intemperance, grief, much anxiety, debility, exposure to cold, lying in damp rooms or beds, wearing damp linen, a warm, moist, or cold, damp atmosphere, the suppression of some long accustomed evacuation, the recession of eruptions, and preceding disease, have been ranked among the exciting causes of Intermittents. But it is more reasonable to suppose that the circumstances act only by inducing that state of the body, which predisposes to these complaints. By some it has been imagined

that an Intermittent fever may be comm
unicated by contagion, but this supposition
is by no means consistent with general
observation, and therfore cannot be est
ablished. One peculaarity in this fever
is, its susceptibility of renewal from very
slight causes, as from an easterly wind,
or from the sepetition of the original
exciting causes. It would appear likewise,
that a predisposition is left in the habit,
which favours the recurrence of the complaint.
In this circumstance Intermittents differ
from most other fevers, as it is well known
that after a continued fever has once
occured, and has been completely removed,
the person so affected is by no means so
liable to a fresh attack of the disorder,
as one in whome it had never taken place.
We have not yet attained a certain knowledge
of the proximate cause of an Intermittent

Fever, but a deranged state of the stomach and prima via, is that which is most generally ascribed.

## Symptoms

The symptoms which occur in paroxysms of an Intermittent Fever divide themselves obviously into the cold the hot and the sweating stages. The cold stage commences with langour, a sense of debility, and sluggishness in motion, frequent yawning and stretching, and an aversion to food. The face and extremities become pale, the features shrink, the bulk of every external part is diminished, and the skin over the whole body appears constricted, as if cold had been applied to it. At length the patient feels very cold and universal rigors come on; the respiration small frequent, and anxious, the

urine is almost colourless, sensibility is greatly impaired, and the pulse is small frequent and often irregular. In a few instances drowsiness and stupor have prevailed in so high a degree, as to resemble Coma or Apoplexy, but this is by no means usual. These symptoms abating after a short time, the second stage commences with increase of heat over the whole body, redness of the face, dryness of the skin, thirst, pain in the head, throbbing in the temples, anxiety and restlessness: the respiration is fuller and more free, but still frequent, the tongue furred, and the pulse has become regular hard and full. If the attack has been very severe, then perhaps delirium will arise. When these symptoms have continued for some time, a moisture breaks out on the forehead, and by degrees becomes a sweat, and this at length extends over the whole body. As this sweat continues to flow,

the heat of the body abates, the thirst ceases, the urine deposits sediment, respiration is free and full, and most of the functions are restored to their ordinary state. The patient however is left in a weak and worried condition; this constitutes the third stage. Having pointed out the phenomena usually attendant on a paroxysm of Intermittent Fever, and likewise their mode of succession, it may not be unworthy of observation to notice that the series of them may be more or less complete, and that the several stages in the time they occupy may be in different proportions to one another. After a specific interval according to the species of Ague, a fresh paroxysm commences in the manner above described.

# Prognosis

No general prognosis, in Intermittent Fever can be given, which is not [illegible]fied by reference to the climate in which the disease appears. In this country and in Holland, Ague is not a disease of danger, but at Sierra Leone and along the neighbouring coast, it is scarcely exceeded in malignancy by any known disorder. Seasons also as I have already stated, effects the general prognosis. It is influenced in like manner, by the previous duration of the disease. An Ague which has been present a considerable time, has so far rivēted itself in the constitution that its removal becomes tedious and difficult. Relapses under such circumstances are frequent and tend materially to injure the constitution. An Ague is more or less dangerous in proportion, as it is complicated with more or less permanent

derangement of the function or structure of an organ. Enlargements of the Spleen, from Ague, are sometimes removed, but they require great vigilance on the part of the practitioner. This phenomena, which is so troublesome to the Physician, so vexatious to the patient and often fatal in its consequences, is probably occasioned by a process similar to that which gives occasion to hepatic affections, which more frequently terminate in dropsies, dyspepsia and inflammation of the mucous membranes of the intestines. The quantity of blood sent to those viscera in a state of debility gives rise to venous congestion, which by distention acts as stimulus to the heart, which puts the arteries of the viscera into a state of secreting action. If this condition of the circulation be not immediately removed, the product of vascular action (which is supposed by some to be febrile but it is more probably sui generis according

to the peculiar organization of the part.)
becomes organised membranes which is known
by the name of physconia. This state seems
not to take place at first, but unless the
secreting proces be interupted, a chronic action
ends in this state, or in Dropsy. The enlargement
of the viscera is sometimes diminished by a
sudden copious deposition of fluid in the cavity
of the abdomen. The secreting proces in which
dropsy consists, is occasioned by extension of
inflammation from the viscera. It sometimes
spreads to the mucous membrane of the intestines,
and assumes the dysenteric form, but when
Dropsy is the result, the peritoneal vessels
are implicated and thus Ascites is the
consequence. These enlargement of the Liver,
and Spleen, may act by pressing the Vena, or
veins. The existence of other varieties of Dropsy
admits of a similar explination. Such a
depression of strength has been known to take

place on the attack of an Intermitten Fever, as to cut off the patient at once, but an occurrance of this kind is very uncommon. Patients are seldom distroyed in Intermittents from general inflammations, or from a palsy of the vesels either of the brain, or Thoracic viscera, as happens sometimes in continued fevers, but when their duration is of any length of time, they are apt to induce other complaints, such as a lost of appetite, flatulency, scirrhus of the Liver and Spleen, dropsical swelling, and general debility, (as I have stated before) which in the end prove fatal. When the paroxysms are of short duration, regular in their recurrence, and leave the intervals quite free, we may expect a speedy recovery, but when they are long, violent and attended with much anxiety and delirium, the cure may be doubtful. Relapses are very common to this fever, at the distance of five or six months

or even a Year, and Autumnal Intermittents, are more difficult to remove than vernal ones. Dipections of those who have died of an Intermittent, show a morbid state of many of the viscera of the thorax and abdomen, but the Liver and organs concerned in the formation of bile as likewise the Spleen and Mesentery, are those which are usually most affected. In all countries Quartans are cured with more difficulty than either Tertians or Quotidians. It is probable that Agues, such as we see in this country would generally terminate in spontaneous recovery, provided that the patient could be put beyond the further operation of the Malaria, protected from exposure to wet and cold, and suitably nourished; such is the opinion of Dr Watson. But posessing as we do a specific for Ague, — if there be such a thing as a specific — there would

be no use in our allowing the spontaneous recovery to be made, or rather we would be inexcusable knowing as we do, that the complaint is the more obstinate the longer it has lasted, and that it tends to the establishment of organic visceral diseases, we should be inexcusable if we did not stop it as soon as possible. It may be dangerous even in these climates to weak or old persons, and it is dangerous to all persons in hot climates, as we frequently have remarked before. Agues, particularly as they occur in hot climates, are lastly to be judged of in reference to prognosis, by the kind of symptoms present, and by the degree of their violence. First from the state of the brain, great dejection of spirits or anxiety, Comæ, lethargy, snoring, convulsions, or delirium are unfavourable, the fevers of Hindostan, which commences with the latter symptoms are

particularly fatal. Second, Of sense. The pupil of the eye, turned inward and downward, false vision, insensibility of the retina to light shown by an immoveable iris, deafness, are also unfavourable. Third, Face. Eyes shut and mouth open, dejected, or ghastly expression, bleeding from the nose, and colliquative sweat, are bad. Fourthly, Bowels. Hard and turned belly, with a swelling of the tonsils, and painful state of the hypochondria and epigastrium, difficulty of swallowing, with a foul state of the fauces; mouth and tongue immoderately black, or sodden, and parboiled, or a white slimy and gelatinous state of the tongue, a pain about the upper orifice of the stomach, portend great danger. Involuntary discharge of urine and faces, at the same time the belly very much swollen; black vomiting attended with great anxiety, giddiness, utter dislike to food, with great debility and without relief

are dangerous symptoms, also a colliquative diarrhoea, with black discharges. Fifthly. Heart and respiration quick, frequent and fluttering pulse, with a pale shrunk and contracted state of the skin, a slow and regular pulse attended with Coma are dangerous, a very rapid, full, strong, and frequent pulse, is so likewise, though it is more easily controled than the foregoing symptoms. The respiration panting anxious and hurried, also sighing and groaning, are bad symptoms, hiccough and interrupted breathing, loss of speech, or great change in the voice are dangerous. Sixthly, Urine. Dark depositing, or brown sediment at the same time eyes are suffused with blood, also an involuntary discharge of urine are dangerous. Seventhly, Skin. Partial cold sweats. blotches like the sting nettles, coldness of the skin, also its insensability, shown by flies settling on the lips, and eyes, a cadaverous perspiration are

unfavourable. Eightly, General character of all the symptoms. Long intervals and short fits are in proportion void of dainger. The fits becoming milder are favourable, in general the mildness of the fits, rather than the completeness of the interval, give the better criterion of safety. Ninthly, Diarrhoea, vomiting, coma, or any of the bad symptoms above enumerated, continuing during the remission, are dangerous. Cutaneous eruptions as the small pox, miliary eruptions, salivation, herpes or ulcers on the lips, or ears, profuse warm sweats are favourable, and often remove the disease. If the Intermittent, be complicated with the symptoms of Apoplexy, Epilepsy, or any other disease, the prognosis is to be taken from that which distinguishes these diseases. Any cause of debility is dangerous, age, intemperance, debilitating chronic diseases are bad precursors, the intervals becoming longer,

malignant symptoms subsiding, the patient more easy in the intermission, youth temperance, the disease being of short duration previously are favourable. Having imperfectly considered the prognosis of Intermittent Fever, we shall proceed by endeavouring to say some thing concerning its treatment.

## Treatment during Paroxysms

The treatment of Intermittent Fever may be divided into two parts, that of the paroxysm, and that of remission or apyrexia. Treatment during paroxysm. Our view in the treatment of the paroxysm, is constantly to put a period to the stage which is present, by inducing that which naturally succeeds it, till a general sweat comes on. There are two inducations therefore, in the paroxysm of an Intermittent, to endeavour

during the cold stage, to induce the hot, and while the patient labours under the hot stage to promote a free secretion by the skin. The following observations however must be kept in sight, that although it is our view during the cold fit, to induce the hot, we are not indiscriminately to employ every means which tend to this effect. Many are otherwise so hurtful that their bad effects, more than compensate for any advantage to be procured by shortning the cold fit. A similar remark applies to the hot stage, all the means we employ at this period tend to promote a sweat, but every thing which has this tendency is not proper.

# Treatment during the cold fit

The patients feelings generally point out the greater part of the treatment necessary in the cold fit. He should be put to bed and kept warm, some have recommended the warm bath. In warm climates it is beneficial to stretch out in the sunshine. The moderate use of warm diluting drinks but no stimulating, fluids is proper. It would be best to allow the patient his own choice of them. The principal drinks which are used now, are barley water, toast and water, weak tea, gruel and &c. These diluents should be taken warm, and for those who are very feeble or exhausted, they may be made very gently cordial, weak negus, or white wine whey may be given, with great advantage. At the same time we may add friction with stimulating ointments along the spine, or what

is perhaps best of all, a hot air bath, applied to the patient as he lies in bed. Opium has been given by some, with a view of cutting short the fit, and not without some succes. But it is the opinion of Dr Watson, that it is better adapted to another stage of the paroxysm. Cullen, recommends emetics. They however cannot be depended upon for cutting short the paroxysm. We should not think of giving them for many reasons, unless some indications of a loaded and oppressed state of the stomach were present, such as nausea, an ill taste in the mouth, a coated tongue, and foul breath. A scruple of Ipecacuanha will be sufficient. The object is to empty the stomach effectually but mildly as possible, I would not give Antimony. Irritability being one of the most frequent and troublesome symptoms, and once excited is always difficult and in many cases impossible to restrain.

Purging and blood letting has been recommended by a number of distinguished authors, but it is the opinion of your humble writer, that they will best in the onset of the severer malarious fevers of hot climates, attended with, as they generally are with internal congestion, which is dangerous to the safety of vital organs.

## Treatment during the hot stage

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The indications of cure in the hot stage of Intermittents, is to promote a flow of sweat. This is done, first by removing every cause of irritation. second by dilution, third by the use of sudorifics, fourth by moderate excitement when the symptoms of synocha prevails and fifthly by by supporting the strength when debility prevails. First, every ~~cause~~ cause of irritation tends to protract the hot stage. Cathartics are improper in the cold fit,

they are necessary in the hot, unless the bowels are moved spontaneously but much purging as counteracting the tendency to sweat is improper. Of cathartics, calomel is among the best, Tartar emetic is used by some to excite the bowels. During the hot fit the patient should the use of diluting fluids. Many indeed do not permit them to drink intile the sweating stage commences. But thirst is hurtful and unless the quanety be very large, such fluids in the hot fit will not be found to increase the oppresion, and they tend to promote sweat. I have had already occasion to remark that vomiting is not so well suited to the second as the first stage. Nauseating doses, particularly of antimonial emetics, are more serviceable in the hot stage, especially when combined with Opium, and when their operation is determined to the skin by gentle warmth. As our view here is to promote perspiration

James powders are used by some, the Pulv. Ipecacuanhae Compositus is used also. If in this country bleeding be requisite at all, it is the hot stage. But we think (as we have said before) that it is not requisite at all, unless their appears to be danger of internal inflammation. Dr Lind who wrote after a large experience, says that he never saw a person die in the cold fit, but has known several carried off in the hot stage, with strong convulsions and delirium. Having noticed the effect of an opiate given whilst the patient was hot and feverish, he concluded to try its effects. Of twenty five patients then under his care, he administered an opiate to each of them. The consequence was, that nineteen in twenty two received immediate relief, the other three had no occasion to take it. Since then he has administered it to upwards of three hundred patients, labouring under this disease, when

given an hour after the commencement of the hot fit, it generally gave immediate relief. Dr Watson says, the best remedy in the hot stage is undoubtedly opium. Fourth wherever inflammatory diathesis is considerable, not only the duration of the paroxysm, but that of the fever, will be protracted. The means of relieving this diathesis, if the symptoms are not urgent, is the various saline preperations, Nitre, and Aqua Ammonia are the best. But when the excitement is considerable we must use more powerful remedies. Cathartics and blood letting may be indicated here. Fifth, Wherever there is much debility especially when those symptoms appear which denote great debility in the natural functions, the paroxysm is protracted and the patient is in danger of falling into Typhus. All that we have to attend to in the sweating stage is to avoid whatever might tend to check the sweat, and

support the strength, if much reduced, by gentle cordials. Sweating may be promoted by diluents, by keeping the patient in bed and covered with moderately warm clothes, by sipping of hot gruel or hot chicken broth. When sweating has continued long enough it may be stopped by drying the patient with towels, changing his linen, and getting him up out of bed. Having considered the treatment of the hot cold and sweating stages of Intermittent Fever, I will now proceed lastly to speak of the treatment during the apyrexia.

# Treatment during the Apyrexia

The treatment during the apyrexia, is the most important, and that which strictly speaking can alone be regarded as curative. The indications are to restore the patients strength, and to prevent the return of the paroxysm. When the inflammatory diathesis prevails, the diet must be such as to counteract it. It should consist of milk and the farinaceous vegetables, and unless the strength is much reduced fermented liquors should be avoided. When debility prevails, the diet should be as full as the stomach will easily bear. It often happens in debilitated states, that the stronger kinds of animal food occasion temporary fever. Beef, mutton, ought to be avoided, veal, Lamb, chicken when the power of digestion is not much debilitated, will be found to answer every

purpose. The same rule applies to liquids. When the strength is much reduced, the patients drink should never be pure water, and in no instance any mixture containing distilled spirits. But wine properly diluted we think is the best. Of the fermented liquors of this country, cider and porter are the best. We shall now proceed to speak of the treatment employed during the intermission, or the interval between the paroxysms. The discovery of Quinia and its salts formed a brilliant era in the history of materia medica. Before the discovery of this specific remedy, cinchona in substance was administered for the cure of this disease, But since the discovery of Quinia it has superseded all other remedies. A question has arisen whether this remedy should be given in repeated doses during the intermission, or whether one very large dose should be given before the paroxysm is expected.

It appears upon the testimony of carefull observers that in warm climates large doses are required, and that it takes a large quantity to expel the complaint, but it is the opinion of Dr Watson and a number of other distinguished Physicians, that the mode of giving the remedy is, two or three grains of Quina every four or six hours during the intermission, has succeeded in eradicating the complaint completely. Arsenic is another substance which has great and unquestionable power over Ague. But this being an active poison should be used only, when the stomach is too irritable for Quina, or when Quina has failed to stop the disease. Fowler's solution is the best form to use it, commencing with five minims increased to ten, two or three times a day is the dose for an adult. Quina and Arsenic are then our two sheet anchors in the treatment

of Ague. A host of other remedies have been recommended, such as willow bark, web of the black spider, charcoal, piperine, chamomile flowers, and several mineral substances, preperations of Iron, and Zinc. We will conclude by saying that there is no disease in which the prophylaxis is of more importance. There is just one expedient which I would suggest to those who are necesarly exposed to the Malaria, that they should wear an orinasal respirator.

An

Inaugural Dissertation

on

Bilious Remittent Fever.

Submitted to the examination

of the

Board of Faculty

of the

University of Maryland.

for the degree of

Doctor of Medicine

by

John McCleary

of

Maryland.

1850.

The disease which I have chosen as the subject of my Inaugural thesis, is one with which, perhaps I am better acquainted than any other, from the fact of living in a district of Country where it prevails endemically, every year, from July till November; and from the additional fact that I have been subject to its attacks, almost every year during my residence there.

I regret that I have not had the pleasure of hearing the disease treated of by the Professor of Theory and Practice, during my attendance upon his lectures. My remarks will be founded upon my own observation and experience, and what I have learned from the books.

The term Bilious Remittent fever is liable to objection, so also is any other of the different names by which it is known. It is remittent; and there are other fevers

which are more or less remittent; it is also bilious; so also is Yellow Fever; and it often happens that the disease of which I am speaking does not exhibit any derangement of the function of the liver. Names have been given to it from the localities where it prevails. If, says Dr. Wood, "its exclusive miasmatic origin be admitted, the title of Miasmatic Remittent would perhaps be the least objectionable of any hitherto given to it." I shall however prefer to call it Bilious Remittent fever.

This disease occurs more or less in all parts of our country; more frequently in the middle and western and Southwestern states than the northern. It occurs intensically along most of our water courses where there are extensive marshes, and in the neighborhood of ponds of standing water and the rich prairies of the west. It is in general a more serious disease in the

southern and southwestern States than in the more northern. I recorded some years in the State of Illinois, and it prevailed there to an alarming extent, almost every fall; especially when there had been great freshets the preceding spring or summer, by which, the lowlands bordering on the water courses, were overflowed. The disease there, was much more serious than I have seen it on the Eastern shore of Maryland, where I reside. But the disease is not confined to this country. "It is endemical most everywhere in hot climates; especially where heat, moisture, and vegetable decomposition act conjointly."

It is considered that bilious remittent fever is essentially the same disease as the intermittent. The two diseases sometimes are so similar, that it is often difficult in relation to a particular case, to tell to which class it belongs. The intermittent

there is sometimes some degree of morbid action, and in remittent often very little, between the paroxysms; and it sometimes is difficult to tell whether there is or is not fever. If the morbid action is fever, the disease is remittent; if no fever intermittent.

In remittent there is a great many different grades of fever, sometimes scarcely perceptible, and sometimes of an almost continued character.

The paroxysms of remittent fever, sometimes occur regularly, and pass through the usual stages of chills or rigor, but not as distinctly as intermittent, and this may be the case for several paroxysms; but as a general thing it does not occur, generally there is a slight chilliness followed by fever, which continues to increase to a certain point, and then goes off, and after some hours to be followed by the same phenomena. Again the fever merely

fluctuates, rising into a moderate exacerbation, then falling into a moderate remission. It occasionally happens, though rarely in which there is no discoverable abatement of the fever, it continuing to increase to the crisis. All these conditions may occur in the same disease; there may be several paroxysms well marked, as in intermittent: then follow by a paroxysm, when the chills and sweating stage is absent; and then gradually run into the continued form. Or it may commence as continued fever, and after a time become remittent, and finally end in intermittent. Bilious remittent fever has the same type as intermittent. The quotidian is the most frequent, the paroxysm occurring about the same hour every day. The tertian, the paroxysm occurring every other day, is not uncommon. The quotidian is extremely rare. Next in frequency to the quotidian is the double tertian, that of an ag dif

-fering from the next, as to time of occurrence and intensity, and the alternate paroxysms resembling each other as to time of occurrence and intensity. It may be considered of a double tertian type, when having an exacerbation every day, it is worse on alternate days. It sometimes happens that there are two exacerbations one day, and one, the next.

In regard to the time of day the paroxysms of bilious remittent fever are most apt to commence, it is thought the quotidian is most apt to occur in the morning, & the tertian about noon; but I believe there is not much regularity about it, and I suppose it is not of much importance except, perhaps, as a matter of diagnosis. When the disease assumes nearly the continued form, there is, generally, an exacerbation in the evening, with the decline towards morning. In regard to the [illegible] of the

fever, then are the means, to estimate it; first in regard to its greater or less violence and secondly in relation to the state of the system at the time of attack.

In relation to the violence of the disease, it is of a great many different grades, from the simplest uncomplicated form of great mildness, which scarcely requires treatment: to the most violent form, which requires the most prompt and energetic means to prevent fatal results. The state of the system greatly modifies the character of the disease. If the system is vigorous, sthenic; blood rich and abundant, the fever is generally of the character called by some writers the inflammatory form. In the asthenic state of system, produced by previous disease or intemperance, we have the low or typhoid form, which requires very different treatment from the first form

The symptoms of bilious remittent fever

are various. The [illegible] whole array of symptoms preceding the attack; again, in some cases, we have only one or two; but generally speaking, the premonitory symptoms, or those which warn us of its approach, are as follows; in the milder and simpler forms. Listlessness, languor, involuntary yawnings, loss of appetite, headache, nausea, bitter taste in the mouth, uneasiness and sense of fullness about the epigastrium, eructations or vomiting, and very frequently more or less heaviness and pain over the eyes. These symptoms are not invariably all present. In regard to loss of appetite, this is not only not present in some cases, but the reverse is sometimes the case, namely, the appetite is sometimes morbidly increased. I remember that in an attack which I had in the autumn of 1830, for some days before the chill was established, my appetite was unusual

increased, and from the indulgence of which perhaps I was insulted for the [illegible] development of the disease. The attack is usually ushered in by a chill or sense of coldness about the back, cold extremities, livid appearance of the lips and finger nails which, after continuing an hour or two, are succeeded by heat of surface, the skin becomes hot and constricted, face flushed and turgid, eyes suffused, [illegible] pulse quick and frequent, sometimes tense; there is great prostration of strength, with considerable distressness, the [illegible] plains of pain and sense of fullness of head, pain in the back, and distress about the epigastrium, which is generally tender upon pressure. If the tongue is examined, it will generally be found to be furred slightly near the root and usually moist and red at the edges. The thirst is usually [illegible]

in quantity, and colour increased. The surface generally becomes, after a few days, tinged yellow, which is sometimes very considerable.

The exacerbation generally lasts from eight to ten hours: sometimes longer, when all the most marked symptoms abate, and a slight moisture breaks out upon the surface, when the patient feels an inclination to sleep. As a general thing, the skin continues dry after the fever has declined, and the patient feels uncomfortable and not inclined to sleep. The length of the remission generally varies with the violence of the attack; in a longer or shorter time, however, the heat of the surface increases gradually, and an exacerbation of the fever follows more generally of more violence than the preceding. In some cases the fever disappears almost entirely, and it is difficult sometimes to say, whether the attack is one of remittent or intermittent

form, this condition of things may con-
tinue for several paroxysms, when the
disease will assume clearly the remittent
form. The stomach is frequently very
irritable, with a burning pain, or great
tenderness about the epigastrium, with
frequent vomiting of bile, or glairy mucus,
sometimes it does not amount to vomiting,
there is great nausea, with ineffectual
efforts to vomit. The headache is gen-
erally very great, and is [illegible] very
distressing, more so than any other sym-
ptoms, I have found it the case in every
attack I have had, and have frequently
observed it in others.

All the above symptoms, in a more
severe and aggravated form, the parox-
ysms longer continued, and the remissions
less distinct, are, I presume, what is termed
the inflammatory form of bilious remittent
fever, [illegible]

An

Inaugural Dissertation

On

# Remittent fever

Submitted for examination

To the

Provost, Regents, and Faculty of Physic

Of the

University of Maryland

For the degree of Doctor of Medicine

By

M. E. Mumford.

of Maryland.

February 12th 1852

# Remittent fevers.

In compliance with the requirements of the respected Faculty of the University of Maryland to whom we return our thanks for their liberal instructions, we now offer a few descriptive remarks on the disease which is to constitute the subject of our thesis. In so doing we are ready to believe that they will make all due allowances for any imperfections which may result, not only from our youth, and inexperience, but also from that anxiety of feeling which is so prevalent with medical students at this particular time of their juvenility. It is not our intention to precede our subject with any ostentatious, or lengthy preliminary remarks; being decidedly opposed to ostentation, especially when it is intended by an inferior to tickle the ear or

please the fancy of a superior.

We shall therefore content ourselves at present by indulging the hopes that by a steady progress in the honorable science to which we aspire, and that by our own exertions, and experience, we may attain that eminence in the profession from which we may feel to shame all empiricism, and loathsome quackery with which we may come in contact, and triumph over some of our medical brethren who from their own avaricious, and selfish desires are always ready to crush to the earth the fairest prospects of the young physician. But that which should mostly stimulate us to renewed exertions, and fill us with the most delightful sensations of gratitude, pleasure, and pride; is the pleasing thought that

we may become the agents in the
hands of our Creator by our medical
skill in soothing the troubled, dejected,
and agonized spirits of a brother or
sister, and receive the blessings of an
aged parent for having been the instru
ment in wiping from his care
worne brow the burning tear of
bitter grief. These hopes we may
cherish when we feel that there lies
not altogether dormant in us that
ambition which should animate the
heart of man when he rightly appre-
ciates the opportunities with which he
is favoured.

The disease of which
we intend to give a brief description
though slightly considered by some
demands our serious attention; as especi-
ally in the section of country in which

the writer resides, it is looked forward to as a very unwelcome visitor; for when it annually makes its appearance it never leaves us without leaving behind sad testimony of its visitation; notwithstanding it is confronted by some very skillful, and wily adversaries.

Remittent fever is one of the varieties of periodical fever. Periodical fever has been subdivided into three principal varieties; the intermittent, remittent, and congestive; these being considered by most authors as one, and the same individual disease. Whilst others have formed different opinions on account of the difference of character which sometimes exists between them; and describe them as distinct, and separate diseases. Be this as it may we

deem it unnecessary to consume time in pointing out the principal features, and stating the grounds of the sub-division; for in doing this we would be going beyond our purpose which is simply to give a formal account of the bilious remittent form. Suffice it to say that we believe them to be one, and the same disease arising from the same causes, and presenting the same phenomena differing only in the degree of intensity with which they are marked. This form of fever is by no means peculiar to the United States being also prevalent in many parts of the old world where from the accounts of ancient writers it existed hundreds of years past. It is however limited to certain localities in different sections of country.

The localities mostly calculated to engender the disease are low marshy districts especially when those districts are in hot climates; for to produce miasma the virus from which the disease nearly if not alway originates it is generally necessary that heat, moisture, and decaying vegetable matter should act conjointly.

Miasma from its aerial, and subtle nature can not be analized. But it operates like the contagion of small pox, measels &c. by coming in contact with the nerves of respiration, and digestion. The brain, and whole nervous system becomes debilitated, also the great functions depending on them for preservation become feeble. Congestion is the result of such feebleness, the capillaries become exsanguinous. Hence

follows the chill or cold Stage. The congestion now excites the heart, and arteries — they commence a tumultuous action which results in the hot Stage or fever. The blood is now thrown upon the surface distending the capillaries, expanding the pores. Now they suffer the serum to escape which results in the last, or sweating Stage. This is the phenomenon in an intermitting fever which is the same in the other forms although not so complete. The time for its return is regulated by the force of the poison producing the congestion again. "This disease is indeed endemic in all hot climates for heat is one of the most essential properties in the production of ~~this disease~~ malaria, which is proved by the well known fact that the nearer we approach the tropical regions the more

prolific and severe do we find the affection. On the other hand in proportion as we recede from the warmer latitudes in the same proportion do we find it milder and less fatal in its effects.

Different nomenclatures have been assigned to this disease according to the different functions upon which it more forcibly acts, the different sections of country in which it more abundantly prevails, and some of the particular features which characterize it. But our impression of the folly, and impropriety of giving to a disease a new name when the old one will answer every useful purpose- beside other unnecessary arguments which we might offer leads us to discard every other than Remittent. We have already offered our opinion of the identity of remittents and intermittent fevers.

The similarity is sometimes so striking as almost to preclud the possibility of a correct diagnosis. If the morbid action which exists between the paroxysms amount to fever it will with very few exceptions be of the remittent type. This fever is sometimes so slight as to cause some doubt in regard to it's existence, whilst at others it rises to such a point of intensity as to baffle all our medical resources. The cold, hot, and sweating stage of remittent are less decided, and distinct than those of intermittent. Sometimes these several stages appear in regular order, again each one of them alternately supplies the place of the other. The quotidian is generally the most common type.

Symptoms. Premonitory.

Some authors affirm that bilious

remittent fever is almost always well marked, sudden, and abrupt in its onset but we are inclined to agree with those who assert that previous to the regular decided attack certain premonitory symptoms almost always exhibit themselves. At least we know this to be nearly always the case in Eastern Maryland. Among the premonitory symptoms which usually appear two or three days before the attack are feelings of general uneasiness, languor, debility, and a general dull depressing sensation, with immoderate weight, fulness, and uneasiness about the epigastric region, dull pain in the head, painful sensations over the eyes, and soreness in different parts of the body. The tongue if examined at this period will be found more or less furred, while at the same time there is

apt to be a sallow complexion. We have seen these symptoms sometimes so arrange themselves as to resemble very closely the slightly narcotic influence of a dose of Digitalis. After the premonitory symptoms have continued for a greater or less length of time the regular attack is ushered in by a distinct chill or rigor which differs much in severity and duration in different cases. Sometimes it is so slight, and transient as scarcely to attract the attention of the patient; whilst at others it reaches that height of intensity, and is protracted to such an extent as to completely to prostrate every nervous and muscular energy. During this chilly paroxysm the pulse is small, irregular, and depressed, incessant thirst, pains in the loins, and extremities, with

occasional nausea, and vomiting.

During the whole course of most cases of remittent fever not more than one well defined chill is observed; the remaining paroxysms (if so they may be called) amounting only to slight chilly sensations, and these appearing at longer intervals as the disease advances.

Immediately after the chill has run its course reaction or fever sets in.

Following this period, and between it and the next there is a general diminution in the intensity, and severity of nearly all the symptoms; this is called the period of remission.

During the hot, or febrile stage the patient is troubled with a general, and disagreeable diffusive heat, the face is red, and parched, respiration hurried, the pulse more or less accelerated,

rising sometimes as high as 130 full, and rather more forcible than in health. The nervous system too is considerably disordered, which is known by pain in the head, back, and limbs; which in many instances is more constant, and distressing than any other symptom attending the disease. The pain in the head is of a throbbing character, and mostly felt over the frontal sinuses. Dizziness, ringing in the ears somnolency and stupour are by no means necessary symptoms in the earlier stages of the disease, although they are frequently found in the more advanced stages. While the dorsum of the tongue is generally covered with a dirty yellowish white fur, the edges are redder than natural. The mouth is dry, and parched the appetite entirely destroyed, and thirst

is excessive. Nausea, vomiting, and ten-
derness over the epigastrium are among
the most common symptoms.
The writer witnessed a case in which the
three last mentioned symptoms were attended
with a peculiar sensation of choking or
difficulty of breathing which was promptly
relieved by a blister applied to the
stomach reaching well over the hepatic
region. The difficulty of breathing in
this instance we presume must have
been produced by considerable enlarge-
ment of the liver, and spleen pressing
up against the thoracic viscera.
These symptoms if the case is not a very
severe one usually continue from six
to twenty four hours, at the end of
which time there is a general abatement
of nearly all the symptoms which
characterize the febrile stage followed

by a gentle perspiration over the whole surface. This is the remission the duration of which is very variable At the end of this period another paroxysm of fever may set in, followed by another remission. Thus the disease may go on — each successive remission becoming shorter until the paroxysms as it were approach, and run into each other. Thus the whole system may be worne out. When the disease has reached this point it must either decline, terminate, or take on a new character.

## Pathology.

Very few anatomical lesions occur from remittent fever which are not common to other acute febrile affections. Inflammation of the brain, Stomach, and bowels observed in this is also common to other fevers.

The softening of tissue as of the gastric mucous membrane, liver, and spleen noticed in remittents is found wherever the blood from whatever cause has become so deteriorated as to be unable to afford sufficient nutriment to the organs. The most remarkable pathological change revealed by post-mortem examination is an entire absence of the natural reddish brown colour of the liver; which is changed to that of a bronze, or slate colour or of both mingled together, on the external surface, and of an olive, or light brown upon the cut surface.

## Causes.

The most essential cause, and we think one that is almost always absolutely necessary to the efficient production of this fever is Malaria, or marsh miasma.

Of the character, or composition of this poison we are unacquainted; for all that is professed to be known of it is but the result of conjectures and hypothesis. Therefore little more is necessary to be said of it than that it is essentially necessary to the production of the disease now under consideration. It sometimes so concentrates itself in the system as to excite the disease almost immediately. At other times it lies dormant in the system for some considerable time until some cooperating cause arouses, and excites its latent energies to a performance of their deleterious offices. Some of the various causes that excite the disease sooner than it would have been under the influence of the malaria

alone; as season, temperature, weather exposure, and excesses of various kinds. Age, sex, and race are also said to have some influence on the occurrence of Malarious fever.

## Diagnosis

Besides intermittents, the diseases with which bilious remittent fever is most apt to be confounded are; typhoid, and yellow fevers, and some of the phlegmasiae; especially when they are connected with functional disturbance of the liver. But a particular attention to some of the most characteristic symptoms of the disease, and a thorough knowledge of the symptoms of the diseases which resemble it will in most cases enable us to form a correct diagnosis. The most characteristic

symptoms of billious remittent are the regular paroxysmal forms, the epigastric uneasiness, the constant pain, or uneasiness in the head, and the evidence of excessive billiary productions exhibited in the purgings & vomiting &c.

## Prognosis.

In mild cases the prognosis is generally favourable. But in the majority of severe cases it is generally grave. although by proper management, and skillful treatment it is often in some of its very violent forms brought to a favourable termination.

## Treatment

Little or nothing is necessary to be done in the cold Stage; except that in some rare cases where it becomes excessively prolonged, or where from

fear of exhaustion it becomes advisable to apply warm fomentations, the hot vapour baths, and sometimes stimulants internally. When reaction comes on attention should first be paid to the alimentary canal. It has been highly recommended by some to commence the treatment with emetics, but in the magority of cases this may, and we think ought to be dispensed with on account of the tendency to gastric inflammation. An active cathartic is almost always indicated Calomel combined with opium followed by some mild aperient medicine is best adapted to this disease, as it has a special tendency to act on the liver. Venesection is often an important part of the treatment; but the

propriety of this measure should be
determined by the condition of the
system, its only beneficial effects
in this disease being to prevent local
congestions. If congestion of any im-
portant organ has taken place it
will be proper to precede or accom-
pany the Cancet with sinapisms,
hot pediluvia, rubefacient frictions &c.
One full bleeding will generally be
sufficient. Diaphoretics should
never be omitted, such as the effervesc-
cing draught, and antimonials when
there exists no gastric irritation, and
when the disease is considerably
advanced we are very partial to
Dovers powders. The above detailed
remedies with the use of quinia
during the remissions will generally
be sufficient in the milder cases.

But additional treatment will be requisite in violent or threatning cases. Mercury given to ptyalism is an invaluable agent. Its powers in reference to constitutional effect are probably more to be depended on than those of any other remedy. If by all our exertions we succeed in bringing on a remission our main staff then is Quinine which if properly, and seasonably administered may ward off another paroxysm that would in all probability prove fatal. Should this remedy fail, an emetic administered at the time of the expected paroxysm together with epispastics to the extremities may have the desired effect. If notwithstanding the above mentioned remedies having been timely administered the

disease still progress we must either persist in them or make use of others according to the indications of the case; and such as a minute investigation of the attending symptoms may suggest to our mind as being appropriate. The treatment during convalescence should be a light, and digestible diet. Aperients if the bowels seem tardy, gentle exercise; and a careful avoidance of the meridian heat, and morning, and evening dampness. When the strength will allow; riding in an easy carriage will effectuate a more rapid restoration of healthy condition.

Finis.

An

Inaugural Dissertation

on

Prolapsus Uteri.

Submitted to the examination

of the

Provost Regents & Faculty of Physic

of the

University of Maryland

for the

Degree of Doctor of Medicine

by

John H. Miner

of

Virginia

It is in compliance only with an established law of this University, that I am induced to attempt to write a Dissertation. In the undertaking many and great obstacles present themselves, duty and imperious necessity however, on one hand urge on, whilst a natural and conscious inability almost deter me from the undertaking. Gratifying indeed would it be, were I able, and at the same time in justice to my feelings, to present these few pages for your inspection, without offering an apology, — but the numerous and pressing engagements at this late day of the Session, force it upon me. I shall attempt however endeavour to render it interesting,

if not instructive, as it is my intention to reject altogether conjectural hypothesis as well as analogical reasoning, and substitute in their stead the firm basis of experimental observation.

In this effort I am pleased to acknowledge that I do not encounter one great difficulty, which besets the path of most young Students; That is, the selection of a Subject.

On entering upon the Study of Medicine with a practitioner of experience and eminence of Virginia, my attention was soon arrested by the numerous cases of Prolapsus Uteri, which presented themselves in his practice. He often observed to me, that he met with

great difficulty in relieving this distressing disease — and that in many cases he was unable to render but little service.

This was sufficient, and I resolved, that not an observation should escape me, when I should have the pleasure of attending the lectures delivered in this University. This was not long withheld, and I have heard from both the learned professors of Obstetrics and of the practice a confirmation of all I have heard from and seen in the extensive practice of my much esteemed and beloved Preceptor. I will be pardoned I hope for here mentioning that my Preceptor is an honourable Alumnus of this University, who graduated in 1824, after enjoying the teachings,

for three years of her Illustrious Professors. He was the House Pupil of Davidge, and his regular correspondent, also of Debutts, Potter, and Patterson, all now mingling with other great and departed spirits, who have paid the great debt of mortality. The individual, to whom I allude is my Honoured Father Dr. Jefferson Minor of Midway, Essex, Virginia. In speaking of Dr. Davidge, Dr. Minor often quoted his language on the death of Dr. Barton, as equally applicable to Dr. Davidge:

"In his mind burned the lamp
"of science; from his heart rose
"the incense of piety; and
"through his actions flowed
"the warm stream of benevolence.

"But, alas! Nature has her de-
"mands, and in a tone and Style
"too forcible and intelligible to be
"misunderstood, speaks to her
"son: Dust thou art, and unto
"dust shalt thou return." —

Without further apology
or preface I will enter on the Subject
of my Essay, and should I in the de-
tail of several cases, which I had the
pleasure to see and attend in con-
junction with my Father — be able
to add to that portion of evidence
and information in the cure of this
formidable disease — ample reward
will be obtained for the attention
paid to and the labour bestowed
upon the Subject.

The learned Faculty will bear in
mind, that these few imperfect pa-

yes constitute the first production, in which I have ever been engaged, and view with a pardoning eye, the many inaccuracies and the juvenility of style.

(Before entering on the disease or its cure I shall first give a brief description of the Womb and its position, — In which I hope, I shall be pardoned for using) the language of some of the writers on the subject.

## The Uterus or Womb.

Dr. Blundell says:

"If we examine the Uterus while yet unimpregnated, we find its bulk in different women, like that of the testes, various — large, however on an average, as a small pear; and it lies in the middle of the pelvis, with its fundus forwards, its mouth back-

wards, its anterior surface directed somewhat downwards, and its posterior surface above." — The uterus is about three inches in length, about two in breadth at the fundus or upper part, and one at the cervix or lower part, and the mouth or opening is called the Os tincae. The surface is smooth, and the skin which covers it is very soft and vascular. The surface of the cervix is rugous, and the Os tincae or mouth can be easily felt with the index finger about three or three and a half inches, within the cavity of the vagina. It is deemed unnecessary here to describe the Vagina: though in most, if not all cases of Prolapsus Uteri it becomes more or less affected, and in some cases more seriously

dy so.

It is admitted by all, that the Uterus is liable to many diseases, and being so intimately connected with all parts of the body, there is scarcely a disease under which women have laboured, which have not at some of its periods been attributed to its influence. We shall confine ourselves to the most obvious disease of the Womb, that of Prolapsus.

"By the Prolapsus is meant a subsidence or descent of the Uterus into the Vagina, lower than its natural situation, and it is termed a procidentia, when the Uterus is pushed through the external orifice of the pudendae." This happens in different patients to various degrees and sometimes gives great uneasiness and

pain, and occasionally renders the patient unable. But little care is necessary to enable us to discover the exact State of the case, and not to mistake it for other diseases.

Married and unmarried women are both liable to prolapsus of uterus, and though, married women, labouring under the disease (in some of its worse forms) prove pregnant, yet (says my preceptor) it is to a great measure an obstacle to pregnancy, and parturition often happens prematurely. Of this opinion and assertion is correct! does it proceed from the particular position of the womb or from the debilitated health of the patient, or from a combination of both causes. I allude here to the inaptitude for conception during

prolapsus. In bad, and continued cases of procidentia, I think conception would but seldom, if ever occur. On that subject our authors give us but little light.

In ordinary cases of prolapsus, they conceive, go through the period of gestation and are delivered without much inconvenience or any increased symptoms of the disease, and in some cases a radical cure is by that means effected.

It is stated by some writers, that "when women, who have a prolapsus are pregnant, the inconveniences are increased in the early part of pregnancy, because the uterus being then more weighty and enlarged, sinks lower than usual into the Vagina." Now without entering

into any argument with the several learned gentlemen, who advance the above opinion, I will only ask what becomes of the stimulating effect of conception, on the womb, at this time; which surely will cause it to ascend; whilst the improved and improving health of the patient will all, I think, tend to alleviate, instead of augmenting the disease. I will here take occasion to mention, that I have frequently heard it remarked by my Father (D.J.M.) and other practitioners of Virginia, that they had <u>never</u> seen a case of prolapsus uteri, in an unmarried <u>Virginia lady</u>, and never in the <u>virgin negroes</u>, and but seldom in the negroes, until after one or more births. — They have seen it in young

and unmarried Ladies from the North.
If true, that it is rare in the virgin negroes, (or those who have not borne children) is not this an evidence of the lightness of slavery in the South.

Prolapsus of the womb most frequently occurs in married women of a delicate constitution, those who from imprudence or necessity, rise too soon after confinement, and who are improperly treated or injured in delivery.

"Fluor Albus, (says Dr. Pierces and others) may be looked upon as one of the most common causes of prolapsus. It relaxes the Vagina and makes it yield to the weight of the uterus."

With deference to the superior judgment of Dr. Pierces, I am inclined to the opinion that he attaches too much importance to the influence

of Fluor Albus in producing Prolapsus of the womb. It is in my opinion more frequently the Effect of Prolapsus, than its cause. I also beg leave to differ with the learned Dr. on the Subject of the importance of the Ligaments of the Uterus in sustaining the womb in its natural position. —

Nature, surely, in her wise and happy formation of the human System, neither formed those ligaments without a cause, nor made them imperfect. — They are fully adequate to the task of holding up the womb and will in all cases perform it, when uninjured.

All will agree as to the general causes of Prolapsus of the Uterus: "Frequent deliveries; — too early ri-

sing after delivery; — very large child-
ren; — a very large pelvis; — habitual
coughs; — severe pushing, and ill con-
ducted instrumental delivery."

(Having) given the cau-
ses, I will now give a few of the Symp-
toms, which are most prominent, and
characterize the complaint. — As I
have ventured to differ with Dr. Dew-
ees in some particulars, I will now
give his words in describing the Symp-
toms, as equally descriptive and cor-
rect with that of others: — Dr. Dewees
says: "The symptoms will be in-
tense in proportion (cæteris paribus)
to the extent of the displacement;
but in all there will be a sense of
something sinking in the vagina,
as if the perinæum were sustain-
ing an unusual weight; with a

dragging sensation about the hips and loins; a desire to make water, sometimes without the ability — and when it does pass, is oftentimes painfully hot; faintness, nervous feelings and alarmes." "The pain in the back is distressing; whilst the patient is on her feet, and gives to her walk the appearance of weakness in her lower extremities, and a constant discharge from the vagina of a more or less vicieated character." I have given but a few of the Drs symptoms, but sufficient for my purpose. — In my opinion in a general way, the proximate or immediate cause of prolapsus uteri, is relaxation of the broad and round ligaments above, which may occur from extra fatigue or unnatural

exertion in previously weak and debil-
itated patients, or from injuries of any
kind, and not from natural inability
in the ligaments, as asserted by Dr.
Dewees. The disease is first felt or
known to the patient by a sensation
of uneasiness and weakness in the
loins whilst standing or walking,
a bearing down or pain in the groins.
Procidentia, though a local disease,
is productive of such very distressing
symptoms, as to bring on several
other diseases, which not unfrequently
undermine the constitution and bring
on premature death to the patient.
They arise from the disturbed func-
tions of the Stomach and Bowels,
diseases of the Bladder and an
impaired condition of the nervous
system. —

On commencing this Essay, it was my intention to conclude with a report of several cases I had successfully treated. In its progress, however, I have concluded to depart from that plan, and to give a general, but abridged account of the treatment and remedies recommended in the cure of this disease.

In the first place, in the Treatment of Prolapsus Uteri, care must be taken, and an accurate examination made to ascertain the true State and progress of the disease, as well as its exact character; for some of the Symptoms may be mistaken for Prolapsus of the Uterus, for some of the diseases of the kidneys and for those of the bladder: particularly inflammation of

the neck of the Bladder.

That being done, the curative treatment is to increase the tone of the relaxed parts, both topically and through the constitution: topically, by cold and by astringents; cold water to the parts both externally and per vaginam. The cold Bath general and local cold astringent Injection; Astringents can be used also with advantage with the Sponge. Pills composed of the Ext. of Gentian, Valerian and Iron. The various preparations of Iron, and Sedine also, have been recommended and used I believe with advantage. A simple elastic bandage should be worn giving support to the relaxed perineal and abdominal walls. Constant attention to the Bowels,

keeping them regular and in a proper condition, — proper but gentle exercise, and strict attention to Diet. For, indigestion is almost a constant attendant on Prolapsus. The selections of such agents, and adoption and observance of such rules, as will impart the greatest amount of tone and vigor to the general system, will in a number of cases, at the early stage of the disease, be all that is necessary. —

Pessaries of various kinds and forms have been recommended from time immemorial by some, nay! by most of the eminent writers, and yet have their advocates. At a Meeting of the Medical Society of Virginia at Richmond, in August last, 30 Members present, a

paper was read by Dr. G. A. Wilson, on Prolapsus Uteri, in which the use of the Pessary was denounced in sound terms. A discussion ensued on the subject, in which most of the members took part; a large majority were opposed to the use of Pessaries of all kinds — a report of which can be found in the Sept. No. of the Stethoscope, Edited by Dr. Gooch of Richmond. I will here mention, that my Preceptor and Father — Dr. Pettersen Minor of Virginia, who, I will be pardoned for saying, enjoys a high reputation and has been very successful in the cure of this disease — is opposed to their general use, believing them often productive of serious consequences, and in a general way acting as an irritant, and

increasing. The unpleasant Symptoms of the disease, particularly increasing vitiated discharge from the womb and vagina. He believed them sometimes of service, when of the proper size and properly adjusted. Dr. Minor makes and uses, what he calls, the Egg-Pessary: — A hole is made in one end of an Egg, the smaller, of sufficient size, to empty it of its contents — a String is then passed through the other end, by means of a large needle, and fastens at the large end of the Egg-shell by a strong and large knot — the shell is then filled with a composition or mixture of wax and tallow or Spermaceti, melted in a ladle with a mouth, and when properly incorporated, the Egg-shell is filled with the

Fluid, and when cold, the shell is taken off:— and you have a nice Pessary, — which can be worn without much if any irritation. The size of the Egg is selected proportionably to the size you wish the Pessary. The string is about six or eight inches long, and is left to remove it by. The patient can remove it herself, cleanse, and then replace it, all without rising up from bed, — and when removed, she can use cold water, alum water, or any other injection, she may have recommended. From the use of this Pessary and a general attention to the system, the Dr. thinks he has derived great credit in the treatment of this disease. —

In all Bad cases, when time is

much general bad health, He invariably bleeds, when there is fever, Blisters extensively, and after one or two Mercurial purges, followed by some mild aperient, brings the system under the influence of Mercury; after which he finds that his tonic remedies, both local and general, will act, when before bringing the System under the influence of Mercury, and before the loss of blood, and application of Blisters, all acting as auxiliaries nothing could be done. —

Balsam Copivae, Iodine, and Sarsaparilla, he believes all to exercise a <u>Specific</u> action on the womb, (Particularly after the above Practice of Bleeding, Blistering, and Mercury. —

Certain it is his (D) Practice in this
disease has been crowned with al-
most unprecedented Success. —
With the use of his Egg-(D) Tessary
he recommends or uses the ordina-
ry (D) Bandage. —

An

Inaugural Dissertation

On

Delirium a Suppressione Potus

Submitted

To the Examination of the

Provost, Regents

And

Faculty of Physic of the

University of Maryland

For the degree of

Doctor of Medicine

by

Edward H. Marshall

Md

# Delirium a Suppressione Potus

It becomes every student wishing the prosperity of the Institution under whose Professor's tuition he has placed himself his own good the benefit and advancement of his adopted science to obey the laws and conform to the requirements of the Faculty of said Institution. Such being our duty we bow to it, and our duty becomes our pleasure under all and every circumstance —

It being required by the Faculty of the University of Maryland for the candidate for graduation, and we being such, to present an original Essay upon some Medical subject, we now as one wishing to conform to all the requirements of the Faculty make a feeble effort is do our duty. We have therefore elected as the subject of our Thesis Mania a Potu or Delirium Tremens. There has been some dissatisfaction with the names given to this disease and not without some cause

Delirium Tremens certainly is wrong or a misnonca for to say a delirium can tremble is ridiculous. Delirium cum tremore has been used instead of the other but to this there is also an objection as being inexpressive for how many kinds of delirium are there in which you have the tremors for instance the last stage of Typhus and Typhoid fevers and also the last stage of Inflammation of the brain &c. Probably there is less objection to the name Mania a Potu but this has its objections also, because the Mania is not strictly produced by drink but from a suppression of the drink or stimulus. and another thing we may have the same state of affairs from other causes beside drink or ardent spirits. Considering the objections to the names we have mentioned and the reasons why Delirium a suppressione Potus has been given viz: It is strictly a delirium fro—

the suppression of the stimulus. We hope the Faculty will grant the correctness of or at least that there is less objection to this name than any other. Dr Pearson of England is the first one that ever noticed and gave to the world any thing like a correct description of this disease. And after him follow Drs. Sutton and Armstrong of the same country about the year 1813. As to the nature of this disease I believe all agree in saying and believing that it is a disease - derangement of the Cerebral functions dependant upon taking from the brain its long continued support upon an accustomed stimulant. After the long continued use of a particular stimulant that stimulant becomes really the natural or healthy stimulant of the brain just as much as the blood or a particular part of it is to the healthy brain. After the brain has been stimulated for

sometime and has become so accustomed
to it that it can do nothing without it;
take away this stimulant and what is
the consequence. The brain becomes depressed
from the regular law of stimulants or its
equilibrium becomes destroyed or the equi-
librium of the mind at least does and we
have particular mania or delirium. But
then some may say that the mind really
quicker and more acute than in
health and that there is increased
power in one faculty of the mind—
to a great degree and that is of the
imagination power true but we must
recollect that there is one fact con-
nected with the brain not with any
other organ in the human body and
that is that the brain under opposite
conditions produce the same Phenomena.
We then consider this disease as nothing

more than the consequence of the de-
pression of the brain itself the consequence
of taking from the brain a long continued
stimulant — —
Symptoms — After taking from a person
a stimulant he has long been accustomed
to he soon becomes very weak and at the
same time shows great irritability of the
mind anxiety and depression of spirits.
He is unable to sleep and is constantly
watching he is very tremulous and is con-
tinually talking of his affairs but at the
same time thinks or suspicions that
some one it may be a near friend
is trying to injure him either pecunia-
rily or his person. At the same time he
is troubled with horrid visions which
but add to his terror he becomes very
restless and is constantly in motion
with his fingers either picking the bed

clothes or his nails at the same time he wishes to be moving about or to get up from his bed and go to another room but is led back easily to bed again by his attendants with these symptoms we may have those of Gastritis or Gastric irritation viz; Great thirst vomiting of every thing taken into the stomach the mouth dry and the tongue covered with a thick brown fur and tenderness over the Epigastric region. We can easily account for these symptoms when the very stimulant the patient has been using would bring about this inflammation or irritation of whatever mucous membrane it comes in contact and the writer believe that in more than a few cases the disease is produced by this gastric irritation on account of which the stomach rejects

the stimulant and the patient is unable to get his accustomed amount of stimulation and as a consequence the disease comes on — His countenance is variable quick and wild but at the same time pale and haggard his eyes are dull and inexpressive except when troubled by some ugly unnatural phantom or some imaginary wrong when it becomes quick bright and fiery his whole body trembles and he is covered with perspiration which gives off a peculiar odour his tongue is tremulous when he protrudes it and is covered with a white creamy mucous the surface of his body is rarely hotter than in health but often the temperature is below the healthy standard owing to the great nervous prostration and to the evaporation of the perspiration his pulse is small

quick and easily compressed. These are the symptoms of a case of idiopathic disease but to these there may be many added from complications of other diseases which is by no means rare and which would give rise to many others not mentioned above. — — — —

Causes — Generally the great and direct cause of this disease may be said to be the discontinuing of a stimulant of some kind — either alcoholic or opiate — the use of these stimulants may be said to be the great predisposing or indirect cause of the disease and the leaving off of those of these stimulants the exciting or direct cause beside the use of these stimulants other causes are said to give rise to the disease — Persons who have for a long time

applied themselves assiduously to some exciting business On leaving it off entirely have been known to [illegible] this disease leaving off the use of tobacco, coffee &c. after using them constantly and in large quantities have been known to produce symptoms of this disease. But by far the most common cause of this disease is the use of and the leaving off from some cause of malt and alcoholic liquors and of opium.

Diagnosis— The diagnosis of this disease becomes important from the fact of its resemblance to other diseases and a mistake in this would be fatal for to treat one for the other would certainly result in the death of the patient. For instance to treat this disease for inflammation of the brain and vice versa in either case

must be fatal And this is likely to happen every day to the unguarded Medical attendant - for the two diseases resemble each other in more than one symptom. The diseases most likely to be mistaken for this, are the delirium of fevers, inflammation of the brain &c. The deliriums of fevers are more incoherent - and do not confine themselves to one subject it is without fear of injury and tremors it does not have the same kind of fantastic delusions. The face in fevers is flushed, eyes suffused Cornea injected the Carotid beats - with increased action the skin is not much dry and the pulse frequent - full and round with these take the history of the case and the diagnosis is easy. From Meningitis or inflammation of the brain we

will find the delirium more violent
and incoherent - than in delirium tremens,
the face will be flushed; skin hot
and dry and great tendency to con-
vulsions pulse full, frequent; and hard.
The patient has all these symptoms without
the great hallucinations and tremors
and these with the previous history
of the patient will render the diagnosis
easy between this disease and Meningitis
and inflammation of the brain.
From Insanity the diagnosis is not
so easily made out - but we must
learn particularly the previous his-
tory of the patient and notice the
delirium and accompanying symptoms
of insanity and we will find that
the disease has been longer and more
insidious in its approach ——

Prognosis— This is not generally when treated correctly a fatal disease — neither is it without any treatment or when left to itself necessarily fatal. We may generally found our prognosis and with certainly upon the case with which the patient sleeps for if this can be brought about with ease we may pronounce our patient safe. The great danger in this disease is from debility or the great prostration after great muscular exertion which may end in convulsions. Guard against these and the patient committing suicide and we need not fear anything provided there is no complications if there should be any complications we must form our prognosis from what organ is affected and to what extent. ~~the Complication~~ We may generally look upon the following

symptoms as unfavourable, Stupor, Convulsions, complete coma, incoherence, subsultus tendinum, a low muttering delirium, dry tongue, cold clammy skin small frequent and easily compressed pulse Dr. Elliotson says when the pulse is over one hundred and very small we looked upon it as an almost infallible bad omen. With these symptoms if the patient should be an old hand drinker and this should not be the first attack and the constitution be worn out by his habits or by disease of any other kind we should consider it an unfavourable case and our prognosis should be guarded. We should also be guarded in our replies to the friends of the patient if there should be any serious complications. If we find no complication the patient young and this the first attack his constitution not

injured his pulse not over a hundred and not very small his tongue moist— his skin natural or not below the healthy temperature and there is not obstinate sleeplessness we make a favourable prognosis— — — —

Treatment — In this disease seems to be the consequence of taking away or suppressing a stimulant the effects of which is complete prostration of the brain and nervous system the first indication is to return the stimulant to the brain or to return to it that amount of excitement to which from long continued use had really become a healthy one. Having answered the first indication the second one appears to be to gradually withdraw the stimulant in such a manner that we shall not again have the same phenomena.

If on visiting the patient the first time we should find that the bowels had not been opened which is the case nine cases out ten we had better precede our stimulant treatment by an aperient but should be cautious what medicine we use as there is great debility and there is serious danger from the smallest amount of purgation. The best aperient we can use in this case is some of the gentlest kind such as Phosphate of Soda or Tasteless salts Rochelle Salts or Bi-tartrate of Potash. Having opened the bowels we must then go about answering the first indication. We must stimulate the brain up to that notch of excitement it was accustomed to before the stimulant was withdrawn. As the exciting or direct cause seems to be the taking away a

stimulant to which the brain has long been accustomed the first thing reason points to is the restoration of that stimulant. As two thirds of the cases we see are caused indirectly from the use of alcoholic drinks they seem ~~to~~ the best we can use in moderate quantity or at least in such a quantity as to bring about the required amount of stimulation which must end in sleep which after all seems to be the grand desideratum in the treatment. The best of Alcoholic stimulants seems to be French brandy in the quantity of two ounces or more every two hours. The attendant should watch the case and after giving one or two doses and he finds that the dose does not excite the patient and the pulse is no fuller and the patient is as restless as ever and prostrated he

may give the same amount every hour or four ounces every two hours. We may make this a settled rule to give the brandy in whatever quantity it takes to effects the patient, let the dose be as large as it will after giving these doses of some alcoholic stimulant. If now the patient not sleep we should then combine with the brandy some of the preparations of opium for it is absolutely necessary for the patient to sleep for he must sleep or die. The best preparations of opium seems to be the tincture There has been cases and the writer saw a case in which morphine had been administered for two days in large doses but with no effect after which the tincture of Opium was given in equivalent doses and it was followed in two hours

by a sweet sleep from which the patient awoke refreshed and convalescent—
In administering the Opium we should be governed by the same rule Should the patient not be affected by one dose we must give larger ones until we bring about the desired effect
Taking all into consideration the best treatment seems to be the following—
Give some preparation of Opium say Tincture if an old drinker in the dose of one drachm in two ounces of brandy every two hours if after giving two doses of this preparation it does not seem to affect the patient we may either give the same dose every hour or double the dose and give it every two hours. We may give these doses for twice or three times and if this does not succeed we may double

the dose of Opium in three ounces of brandy and keep on doubling the opiate until it has the desired effect. We know that there has been objections offered to the use of Alcoholic stimulants but these we think are not sufficient if the case in the judgement of the Medical attendant demand the use of Alcoholic stimulants it is the imperative duty of the Physician to administer them. ——— ——— ———

Should we prefer the Opiate alone we should begin in moderate quantities but should not forget that in this condition the patient will bear much larger doses. Should we use Morphia we may begin in half grain doses and increase even four or six times or oftener until the patient sleeps, Should we use Black drop

we may give corresponding doses and increase as before mentioned or should we use Opium in powder we may give three grains and increase until sleep is procured for you must not forget that the patient must sleep or die. Various other modes of treatment have been instituted among them the free use of the Lancet. Of this we need only say if the present general received pathology be correct then the lancet must be dealt to. An Emetic plan of treatment has been recommended by Dr Clapp of Philadelphia but being often complicated with Gastritis or Gastric irritation and with Meningitis and inflammation of the brain or Encephalitis we think there is great objections to this plan of treatment. The patient had better be left to

himself than exposed to this treatment.
Of the various modes of treatment the
Opiate with some of the Alcoholic
stimulants seems the best that Pathology
and reason points us to. After sleep
has been produced then we must begin
to gradually withdraw the stimulant
but we must do it in such a manner
as not to entirely take away all support
from the nervous system, he should
have a moderate quantity every day
for a few days gradually diminishing
it until it can be entirely withdrawn
which must be done as soon as it can be
without cost to the nervous system. —
During whatever treatment we prefer
the patient should have a rich nutritious
diet and should be kept in a dark
quiet room. Should he wish to leave
his room or bed he should be persuaded

to go back which a judicious person can easily do and no force should be used with him or anything done which would cause him to make the least muscular exertion for fear during the exertion the patient might be prostrated to such an extent that he might never recover from it or during the exertion he might fall into a convulsion which would probably prove fatal. The patient should be encouraged in his various delusions and should not be reasoned with as to their falsity for such a plan as that of denying such thing can but add to the patients irritability ——
Should there arise any complication during the disease it should be treated on general principles but at the same time we carry on our treatment of the disease as if we had no complication

except so far as the treatment of the complication modifies the treatment of the Delirium a Suppressione Potus. Having relieved our patient it next becomes our duty to tell him of the danger he is in and the ultimate consequence of such a course and leave him then to his own reflections and conscience to the Temperance Societies and the Physician of his Soul ——

Edward W. Marshall

An

# Inaugural Dissertation

On

The diversities of facial expression, the result of moral and physical organization and their importance in a Diagnostic point of view.

Submitted, for examination.

To the

Dorset: Regents & Faculty of Physic

of the

University of Maryland,

For the degree of

Doctor in Medicine

by

Ada S. Linthicum

of

Maryland

[illegible]

Diversities of Facial expression; the result of Moral and physical organization and their importance in a Physiognomic point of view.

The face in all its varieties of change, embracing the diversified action of the muscles, forms a highly interesting subject of inquiry- inasmuch as to muscular motion and action, as well as to moral complexion, must be referred the variety of expression in "the human face divine". It becomes a subject of additional interest, since an intimate and extended knowledge of this subject, is necessary to qualify us to determine with accuracy & precision, the distinct varieties & mingled modifications of disease: & is used when a knowledge of human nature,

or the secret springs which either prompt or resist the acts of human conduct.

Whatever unfolds the heart will aid us in our investigation: Nothing is superfluous which unveils the connection between motive and action; on the contrary, every thing will be important that reflects light on the condition of man as he is.

Persons may feign to be worse than they are in reality, or the contrary: In either case our diagnosis would be equally erroneous and our remedial measures correspondingly improper, if our knowledge shall not have prepared us to detect the imposture.

The shape or contour of the face is presented to us as under four divisions or circles; each division presenting an Elipsis. And a slight alteration of any one muscle of the face, must

not only change the shape and relation of each Ellipsis, but it must also alter materially the Ellipses collectively, in their general and relative position and effect. Thus, if the occipito-frontalis muscle be drawn back posteriorly, the superior segment of the largest Ellipsis will be increased in dimensions from the nasal process of the frontal bone to the border of the hair, effecting a very obvious change of features, if in addition to this, the Platisma myoides be simultaneously contracted, all the Ellipses will be elongated and most hideous expression of the Countenance will result.

Perhaps it is scarcely possible to move a muscle of the face without producing some change, since the movement of one involves that of several, from the slightest smile to the extreme broad grin. The shades of variation are almost

numberless and in some instances so
delicate as to be scarcely perceptible.

Artists find great difficulty in giving
a full and accurate expression to the
mouth, for this simple reason, that
this is a feature blending together several
expressions in consequence of the con-
vergence of a number of muscles
to the orbicularis oris or the angles of the
mouth: besides which they pass into
each other gradually and are lost in
almost imperceptible shades, so that
the utmost perfection of the limits are
is necessary to do justice to this delicate
subject.

The muscles concerned in giving
expression to the face may be considered
in number, fourteen pairs and two sin-
gle muscles.

The movement of these muscles, is

invoked by the nerves, of which, there are eight pair, which may be considered as being directly concerned in the mechanism of producing variety of feature so far as it is dependent upon muscular contraction and relaxation. The fifth pair, a branch of the seventh pair (Nervous Auditorius) forms the principle nerve of the face.

Ideas excite the brain or rather particular portions of the brain, this calls into action the nervous cords in connection, which act like so many springs and these in their turn give play to their respective muscles.

How strikingly does the expression of the face portray the existing condition, whether he be sick or well, and in many instances, what particular disease is preying upon him! Take

Take as an instance Pericarditis and Yellow fever. In the first instance the patient looks haggard and anguish is strikingly depicted; in the second decomposition of feature or grimness. In the same manner the passions are seen, as joy, grief, hope, fear, love anger, melancholy and despair. It does not require a very accurate observer of nature, to detect these or any one of them.

The muscles of the face are dependent entirely upon volition, We can assume a smile or a sour, turn up the lip in haughty disdain or expand the whole face in the utmost benignity, kindness and complacency.

The brain is excited to action by the idea of objects or external things, which make their impression on the animal senses; and according to the

nature of these impressions, will be the
effection of the muscles corresponding
with them; and the expression of the
face by the muscles.

Much importance has been at-
-tached to Temperament, of which,
the general division is into four va-
-rieties, the Sanguineous, the Bil-
-ious, the Lymphatic and the Me-
-lancholic: and it is admitted that
no Physician can form proper diagn-
-oses of diseases without reference to
them either in their cardinal or se-
-veral modifications and interming-
-lings. It may be assumed as an ax-
-iom, that what we shall term Ma-
-teriology, as respects a Diagnosis, is
of no less importance, than a know-
-ledge of Temperaments.

In prescribing for a disease, it is of

not minor importance, to be acquainted with the character of the patient in its various lights and shades; but above all to understand individually the ruling passion, that predominant moral quality which absorbs all others. Some individuals are constitutionally timid; others daring; some marked by viracity; others by dullness and melancholy; some bear pain with fortitude; others shrink with horror from the very idea of suffering. One man will faint from seeing another bled, another will resolutely advance "licking the bubble reputation even in Cannons mouth."

These are important facts and lead to important and salutary discriminations, in adjusting our remedial measures to the particular cases.

"The severe pain which follows the laceration of a nerve, will most forcibly impress itself on the expression of the face, but some men will bear a limb torn from its insertion or crushed in pieces without given any evidence of symptoms of mental or corporeal agitation.

On the other hand, numerous have been the instances, where the slightest flush wound have occasioned deadly paleness, instant vomiting and profuse perspiration and universal tremor. Under this view the influence seems to be both natural and just, if so great a disparity exists in the organization of man as to exhibit such such striking differences of human conduct, there must exist a moral reason for this disparity. And where should we look for the rational, if not in the primordial cause.

structure and contingent development of the divine work the Brain and its dependancies?

It will not be assumed, that there is any constitutional, essential or inherent difference in constituents of the Cerebrum as to its particular organization and extent of its connection with either the white or gray tissue, we are not permitted to doubt that a material difference may and does exist. For it is to be fairly presumed that without this relational disparity, as regards the entire Cerebrum of particular organs, there never could exist such obvious and impressive marks of distinction in the diversified shades of human character and conduct.

Who will say, that the medulary substance in the Cerebrum of the

Melancholic, possesses essentially an identity of nature with that of the Sanguineous formation: the elements of the brain may be the same and yet the mode of organization and action different.

"In the most superficial observer, the vast variety of physical configuration is sufficient evidence, that nature did not cast in the same mould, one of the most noble of her works, the human head.

"The almost countless shades of facial lineament, perceptible every where, irresistably impel us to the conclusion, if we take into consideration the antipodal extremes of facial expression, that such a variety can only have its origin in a difference of moral organization or physical arrangements.

The accidents of birth or Education may give rise to their own characteristic peculiarities, so far as manners and even facial expression are concerned, but we cannot in birth and education perceive the cause of the facial of the Constitutionally Melancholic, and the highbrows of the Constitutionally Sanguineous; since both these varieties are to be recognized amongst both rich and poor.

The question may be reasonably asked why one is dull with the eyes heavy, and another smiling and gay, the eyes beaming with intelligence and giving evidence of joy and gladness in the inhabitants of the sanctuary of the heart? Will the distinctions of birth & fortune account for the these opposite conditions? Certainly not! We are driven inevitably to the brain, the

great Reservoir of ideas, the temple of thought and the masterly agent, which the great first cause has provided for the preception of cause and effect, and for the perfection of a race of rational beings.

It has been already remarked, that without any elementary difference in the substance of the brain, there may be a vast degree of moral disparity. Our felicity or infelicity is in our own hands: we are placed as the agents of our own particular mental constitutions; malformation of the brain or derangement of function and its consequent idiocy, do not commonly imply moral agency, as they imply no moral accountability. The question may be asked, is the moral difference, perceived in the world, dependant upon a difference of cerebral structure? On the difference of cerebral complexion dep-

dependant upon moral diversity? Let it be borne in view, that the word moral is used strictly in reference to the mind. Before the character is permanently fixed, the muscles forming the different Elipses have not impressed themselves with the cutaneous tissue external face. But when the character, the pro result of particular mental constitution, is formed, each muscle concerned in giving facial expression assumes its proper form and relation and concurs in the arrangement of each Elipsis.

The voluntary muscles are dependant upon volition: but upon what is volition dependant? it is movement of the mind immediately and necessarily dependant in moving and achieved by the brain, without which

it cannot be performed and by which it is accomplished. This is truly the "post et origo" of all mental operations and must be sought for in that wonderful creation, the soul of man, which is an intellectual existance or spiritual mode of being, intimately connected with matter but superior to it, having the control of all movements and actions.

The body is an organized mass of matter, composed of a number of organs, each organ endowed with certain functions and the congeries of organs forming a perfect organization or the human system, which is essentially physical in its nature and in its wants. This mechanical structure, the body, is or may be irregular in its movements,

this is disorder; or it may be entirely entirely arrested; this is death.

Flesh is endowed with a principle of animal life, which must be considered in contradistinction with the intellectual being; the soul is not this animal life nor has it the power of imparting it; it cannot repair the waste of parts by reparative action, it cannot confer vitality or sustaining energy, when any essential organ is sinking before the triumphant march of disease. It is then but a guest it cannot confer life; it is itself dependant for earthly existance on the body; the body is entitled, dependant on a series of organs organic, endowed with a specific action and the whole being governed by certain laws, essentially and particularly adapted to the

well being of the animal economy. What is this principal of animal life is and how it acts, has been variously explained.

The doctrine of the vitality of the blood, has been a standing argument of many philosophical observers, just as if a knowledge of the effects was sufficient, was without tracing the effects up to their appropriate & and legitimate causes. Even admitting that the blood has a vital property, it being physical must have derived this vital property from a cause and this cause a physical one. There must be a subtle, imponderable agent by which all all motion is produced and by which all attraction and repulsion are maintained. This agent

was believed to be Electro-magnetism. The pursuit of this highly interesting enquiry, would be too wide a digression and foreign to the present subject.

It has been maintained, that the constituent elements of brain in two persons at birth are analagous: but that if moral differences and activities of character are subsequently developed, such distinctions, are the causes of the diversified varieties of moral character, witnessed in respective individuals. But even this tries to establish the fact of the constant and uniform similitude of cerebral structure: certainly not since it is but an assumption with the necessary proof unquestionably a large portion of individual character is to be referred to the contingency of circumstances.

The individual exercises are capable are ca of exercising a regulating agency or power of self-formation, for it would never comport with reason, to abandon him, to the impulse and direction of accidental circumstances or incidental causes; deprived of all redeeming or controling power.

There is a difference of physical organization, by which, is intended, a difference of mental constitution, dependant, as previously hinted, on the relative proportion of the white and red tissue; for who ever beheld the full vigour of the intellect, the unveiled glory of intellect an genious, in the phlegmatic, in which there is essentially a vast predominance of the white tissue? May we not account for the fact, on the ground, that the

white tissue is less highly vitalized than the red and as there exists an inferior degree of vitality in this organ there is an inferior degree of intellect. All have not taken rank in the elevated station of Plato, Caesar, or Cicero, Locke, Newton, Milton, Franklin or Washington. It is not supposed for a moment, that had all been placed under similar circumstances, they would have acted the part of the illustrious men. And why? the difference will be found, in a difference of moral constitution or cerebral structure.

There are those who are utterly devoid of ambition and those in whom it has "a local habitation and a name" in whom it exists as an all absorbing passion, its throne, the heart, and its the brilliant and immortal concep-

of the brain. This diversity of moral constitution or cerebral structure, makes one man the light of the age and places another in inglorious and unenveilable darkness.

With these facts in view, who will say that the face is unmeaning pictures without its lights and shades or its distinctive differences? As the index for the soul and the mirror for the body, we may consult it. In their mutual sympathies and relations, it may be seen whether the light of intellect predominates, having triumphed over the animal instincts or whether the mere animal senses rule, having gained the ascendant over the dominion of thought. This investigation is useful in practical point of view; for then the onward

march of disease or the play of passions when the mind has sustained a shock, it may unfold to us source of knowledge, on which and by which we predicate the Latin means of Cure.

Behold that face! it is the face of the maniac! The moral shades of character are strikingly impressed upon the features. His mind is not like that of other men. His moral character is changed; what train of events has produced it? and how. With the causes, that accomplish the functional cerebral disturbance, must be immediately associated the restorative measures. We are aware that, through the medium of Emotions, we must seek to restore Reason to her throne, with the aid of physical resources. The high dom-

dominion of reason, imperiously demands the normal condition of the brain. An acute observer of things once remarked, that language was given to man to conceal his thoughts; but here this question arises is it possible for a man to conceal his thoughts by the mere play of words? Do they not infringe upon the face, making their particular expressive and is not the smile, which is intended to conceal them, to the close observer, but additional evidence of their true meaning and intent. The most skilled politician with all his art, has not sufficient address to conceal his disposition; he will give evidence by his character in silence and reserve or in an attempt to throw a covering around his feel-

personal agrandizement, his petty pol-
-icy or his plans & general operation.

There is something which enables
us to identify an individual, who
we may not have seen for many years;
if asked what this distinguishing or
characteristic is, the answer would un-
-doubtedly be facial expressive, imp-
-arted by individual organization.
We do not in this case, merely perceive
the human form &, similarity of pe-
-erson, may be seen frequently but we
perceive something more; we recog-
-nize a moral peculiarity, communi-
-cated from the brain by the muscles
forming the contour of the face. It is
said of a celebrated Commander of an-
-tiquity, that he possessed the remar-
-kable faculty of identifying every Soldier in
his army and calling him by name.

He did not distinguish them by any mark upon the dress, for their equipage was similar he recognized each by his own particular countenance. How vast and innumerable are the varieties of expression in so many myriads of human beings, when it is impossible to discover two precisely similar: Let any two be selected, who are deemed to be alike and the critical observer will instantly detect distinctive features; the figure may be the same, the movement, the outward habiliment, the nose, the eyes, the mouth, the forehead, the chin, the contour of the face, as far as we can discern, are similar; still there will be shades of difference, arising from moral causes, and these causes will impress their peculiar variety of expression in the countenance.

We have the expression and the ex-
pression of anger. These instances
are given, because they are the extre-
mes of expression. In the one the mu-
scles are relaxed; in the other they
are contracted and both are produced
by impressions of the brain primarily.
When is true greatness of mind or
grandeur of soul, it is impossible for
the possessor to conceal it. He may
be wrapped in silence, involving
in his own magnificent thoughts. He
may give us no idea of his character
or disposition, either by word or deed
He may fancy himself unknown or
unperceived, still he is both known
and perceived; no brilliant thought
or excellent speech was necessary to
teach us this: So it is as if we saw the
naked, luminous spirit before us.

radiant in its own peculiar and unearthly light, beaming in the simplicity of its native beauty and invested of the grosser covering of clay. It is as if the eye of the critical observer pierced through the mass of flesh and bone and beheld this disembodied and self existant mind!

What a sublime subject and what a wide field for the inquisitive searcher into the arcana of nature!

What is man? What is mind? Act How does mind act upon matter & matter upon mind? By what laws are their sympathetic relations maintained? By what peculiar concert does one act with another? Do distinct laws controll each and yet each act as if it had a distinct existance? So intimate is the connection that

between volition and action there is but a moments time. With the will to extend the arm the act is already fulfilled. Can it be nervous energy is it some subtle fluid, pervading all space and transmitted first by the blood and then by the nervous tissue, from extreme to extreme with the speed of thought: The body is the offspring of earth; the mind the child of heaven. An emanation from that self existant principle or essence "from which all things proceed in which having proceeded all things live - toward which they tend and into which they are ultimately absorbed".

It would be unnecessary to detail the conflicting circumstances opinions which have been offered by dif-

different persons, concerning the nature of mind and what or where is the seat or location of the soul. One author with more verity than judgment considered its seat the pineal gland; while others have located it the villous coat of the stomach, from its extreme sensibility. These notions are now obsolete, the age has outgrown them; they belong to what has been - they are the peculiarities of an age that has past. It appears reasonable that the characteristic differences of individual beings, should be recognized in the countenance, visible through the mass of tissues flesh and blood the constituent parts of our physical being, are the same, must we not then look to the moral constitution for the variety of lights and shades in the human character?

An individual is, in a measure, what he thinks: his thoughts give complexion to his character; they impress and mark his moral being or rather they impress and fix his own peculiar mental existance; are not all ideas acquired? they are elements of knowledge; they are not implanted in the mind at birth; they are received through the senses, acted on by external objects; they are not innate. The complexion of the mind is to be received and much depends upon the exercise of the external senses.

The mind of the infant is as a sheet of unspotted paper to be written on and impressed by the symbols of external things. As are these such will be its ideas; and of the nature of these will be its future character.

To a certain extent the mind is its
own creator; it forms itself; if it were
not so, man would not be a moral
agent but the subject of a blind fatal-
-ity or the victim of a wanton fortune.
Do not the manifest physical differ-
-ences existing between different ind-
-ividuals consist in and arise from
a variety in the relation and propor-
-tion of the constituent particles of the
body together with the diversity of
cerebral structure? Is temperament
not the result of organization and
idiosyncrasy dependent upon the
functions? One man will faint-
-ing the odour of the rose, this is idi-
-osyncrasy; another sits in an [illegible]
-tance unhappily in himself though
surrounded with all the comforts
and without a single adequate
cause of complaint, this is temperament,

The more prominently objects are grouped together, the picture will be the character not only of each taken separately but the characteristic difference of the whole. Hence the beauty and utility of systematic management. Things placed in parallel resemblance or position, although there may be shades of difference, never fail to make a deep and lasting impression on the mind. There are certain points of general character of similitude and whatever falls between them is, by the power of association, held up in a kind of bold relief; hence if the memory can grasp but one link in the chain, it is enabled by pursuing the train of resemblance & similitudes, to follow on to whatever is wanting

or remotely connected with the primitive idea or first object of sound-ication. The system of connected objects as exhibited by the French nomenclature of Chemistry is one of the most ingenious of human inventions and admirably calculated to diminish the amount of labour, which would otherwise have been imposed upon the powers of the memory. Such a system is required in order to reduce to the standard of simplicity the science of Pathology. If the relative motion of one, two, or three muscles expresses a peculiar passion or feeling recognized in a peculiar disease, what great advantages would result, to the Medical Science from a nomenclature based on these views!

Is there not thus a possibility of having a distinct countenance for each disease and cannot each peculiar expression be communicated by a movement alike formed in the individual or collective action of the facial muscles.

The tongue, is as important an index in forming a diagnosis, so is the pulse and the skin; why should not the various modifications in the expressions of the face be made tributary to the same purpose: all that can assist in arriving at a knowledge of diseased action, should be embraced and made auxiliary to the philanthropic and sublime purpose, of grappling with disease and placing it before the mighty march of mind.

In

Inaugural Dissertation

on Etiology

Submitted for examination

to the Provost, Regents, and Faculty of Physic

of the

University of Maryland.

For the degree of

Doctor of Medicine

By

1852 Wm Montgomery Thomas

Wilson Sin

Dedication.

To William Power (M. D.

late professor of Theory and Practice of Music in the University of Maryland, to whose lectures I had the pleasure of listening during the Session of 56 and 57. For his gentlemanly and courteous conduct towards his pupils and for his willingness to communicate his knowledge to all those who desired it. Although incapacitated from lecturing again in consequence of the ravages of a blow, but not less fatal disease, against which, as yet, the combined powers of science have been unable to erect a barrier, and although perhaps he is destined soon to quit this stage of action, in the which he has played his part so nobly that he has no superior of his years; yet his memory will live

long after his head had been laid low
in the dark and silent grave.

Thus the University of Maryland was
deprived of one of its brightest and noblest
ornaments, when his Herculean mind
was made to bow in humble submission
to the mysterious workings of a superior
Power. "Sic transit gloria mundi."

The Author.

Gentlemen

As, in the course of medical tuition it becomes necessary for a Student to present to your body, a Thesis, on some subject connected with medical science, before he can receive that, which is generally the Ultimatum of his desires and hopes, and for which, he spends hour after hour, and day after day, in the Halls of the University, and in private study in order to obtain. I shall therefore endeavour to comply with the requisition as far as I am able. But the degree which the Student receives at the Medical College, is not the thing which will assist him at the bedside of a patient, when he is endeavouring to ascertain the nature of the malady with which he is afflicted; and the safest, surest, and most expeditious mode of returning him to health again. I say it is not

the degree that will solve the problem for him under such circumstances, but the acquisitions he has made during his pupilage, and his ability to apply the truths which have been given him that will stand by him in the sick chamber. All that the M.D. can do is to place him upon the common platform with the rest of his professional brethren, and then (if I may be permitted to use a very homely but expressive phrase,) he must paddle his own canoe" down life's swift and changeful current, depending upon his own exertions for his future eminence and success. For after he has passed the Halls of the University, and enters upon the laborious and perplexing duties of the practitioner, the M.D. only honors him as he honors it. You will therefore, Gentlemen, perceive that it is not entirely upon the degree that I shall rely for my future

success, but upon my own exertions, guided by the general precepts which you have both individually and collectively given me as landmarks by which to direct my steps through the varied, toilsome and difficult paths of science, and upon which I must depend in order to reach the summit of the lofty hill of science.

Omnipotence hath declared that, "in the sweat of thy face shalt thou eat bread" and this declaration (I believe) refers alike, as well to the scientific as to those who perform menuary labor: Then upon the general bearing, as well as upon the immutability of this declaration let no man who would succeed in any undertaking day to himself, I will not work. In presenting for your examination a thesis on some subject connected with medical science, I do not expect to discover to your minds any thing

new but only to state some few facts on a subject with which you all are much more familiar than myself. If what I may say should not meet with your own superior views, I shall at least expect that generosity of spirit which I trust is peculiar to your honorable and liberal profession, and of which you all as professors, are ornaments. I will therefore proceed with the subject of my Thesis which is, Etiology, or the causes of disease. The investigation of this subject together with the effects produced as well as the means of prevention; if followed strictly is almost inexhaustible; and might be made to fill volumes. But in following our investigations strictly as to cause and effect as it relates to disease, it might be proved or at least appear to be proved that our beings or existence and the cause of suffering and the

ase, and that disease was the necessary
consequence of existence. I do not propose
however to follow this subject further in that
sense, but only to state some few facts which
are known in relation to it. It cannot be
denied that sometimes it is impossible to dis-
cover the cause. But as Dr Watson says
"the ascertained causes are many and
various. Whatever ministers to life, health
& enjoyment, may become the medium
under changing circumstances of pain, dis-
ease, or death. The atmosphere in which we
are constantly immersed, is full of dangers
Both the organic and inorganic world
of matter around us abound in poisons,
they lurk in our very food, which becomes
pernicious when taken in excess, or when
it consists of certain substances, or certain
admixture of substances. Our passions and
emotions also, nay even some of our better

impulses, when strained or perverted, tend to our physical destruction."
The seeds of death and disease are within as well as around us. For oft
The all-surrounding heaven, the vital air,
Is big with death. And tho' the putrid south
Be shut; tho' no convulsive agony
Shake, from the deep foundations of the world,
Th' imprisoned plagues; a secret venom oft
Corrupts the air, the water, and the land."

Although it is sometimes dificult or impossible to discover the cause, yet if we observe closely the phenomena that present themselves they may lead to some useful plan of treatment. In enumerating the various causes that give rise to morbid phenomena I shall follow somewhat after the arrangement of Chomel, and as I stated at the beginning that I did not expect to give much

that was new, upon this subject and if I do not give the marks of quotation to every thing that may seem to be his or others' views, yet it cannot be considered a literary theft, as I gave a fair understanding at the start and did not claim any thing on the score of originality. In truth it would be a difficult matter for me, to give my own view on any subject; which might be considered peculiar to myself, when I seek to state facts which have been stated before concerning it, and to which I am indebted for my knowledge.

I shall first speak of predisposing causes. A predisposing cause is defined to be, any thing that has had such a previous influence upon the body as to have rendered it unusually susceptible to the exciting cause of the particular

disease. The General predisposing causes are, for the most part diffused in the atmosphere, or arise from certain local conditions. The air has a very decided influence upon the human body. The frequent changes of the atmosphere are occasional, rather than predisposing causes of disease. It is more particularly, when for a long time in the same state, that the air seems to produce modifications in the human body, from which result various predispositions to disease. A cold and dry air predisposes to deep-seated inflammations, and gives to the greater part of acute affections which may be developed, their character, or what has been called inflammatory nature. A warm and dry air hastens (it is said) the development of superficial inflammations, as erysipelas, and the [illegible]

stamina, and often gives to acute dis-
ease the form termed bilious. Affections
of the mucous membrane and those
termed adynamic, usually prevail
under the influence of a warm and
moist air: catarrh and rheumatism
occur more particularly when the at-
mosphere has been for a longer or shorter
time cold and damp. Edwards observes
that "deprivation of light dispo-
ses to anasarca, scurvy and scrofula,
and always gives rise to a sort of etiola-
tion, similar to that produced by the
same cause in vegetables." But this
I conceive is a matter not yet fully es-
tablished. It is doubtful whether the
deprivation of light per se, is the cause
of the diseases which he has enumerated.
I think ~~they~~ are the result of other causes
combined; such as impure air, improper

- insufficient food, insufficient clothing
nd in scrofula there is frequently a hereda-
ary tendency to the disease. The air which is
ot renewed, soon becomes vitiated, as may
e remarked in confined apartments, and
n subterranean abodes which are generally
ccupied by the poor of cities and among whom
hese diseases are principally found. I do not
think that it will be found that it is owing to
he non-observance of proper hygienic precau-
ions both upon the sea and on land, that it is
productive of scurvy, anasarca, and scrofula,
other than a deprivation of light.
Although man is capable of inhabiting almost
any part of the known globe, yet he cannot
scape the influences which is exerted upon
is constitution, or the morbid modifications
ommunicated. A southern climate exerts
n enervating influence upon its inhabitants
nd they are not prepared to undergo such

hardships as those who live in a more northern
one. This was shown by our troops during
the Mexican campaign. While the
troops of South Carolina and other southern
States suffered much from disease; those
of Illinois and Wisconsin suffered compar-
atively little. Of course I except certain
contagious diseases which were very prevalent
at one time in our army, and which were
the results of immorality, rather than the
influence of the climate. In these diseases
all suffered alike who subjected themselves to
the contagious principle. Persons residing in
a southern climate besides being enervated and
relaxed in their general system, are also more
prone to abdominal diseases than those living
in a northern one, while those in a northern
climate are more prone to thoracic affections.
A city and a country life disposes to very
different affections. The neuroses, scrofula,

achitis, and Phthisis Pulmonalis are far more
frequent among the inhabitants of a city than
among those who reside in the country; while
those who reside in the country are more expo=
sed to the causes of acute diseases, and chron=
ic diseases are seldom found, except they result
from the inefficient treatment of acute af=
fections, or are the result of constitutional
taint. Chomel remarks that "the changes
brought about in certain situations through
the agency of man, as the clearing of forests,
the cutting of canals, have sometimes pro=
duced a marked effect upon the sanatory
condition of the population." Now it cannot
be denied that while the clearing of woods,
and the digging of canals sometimes
are productive of good; it is also equally certain
that sometimes they are productive of disease.
This case related in Dr Wood's practice of
Physic which fell under the observation

St Joseph Parish of Philadelphia; where
family which had been previously healthy
were attacked with a violent and fatal fever
of a malarious nature in consequence of
having cut an avenue through a wood
which intervened between them and an exten-
sive marsh; may be considered a proof of
the latter assertion. I have been informed
by those who lived in the vicinity of ca-
nals previous to, and after their opening, that
before the cut was made the inhabitants who
had enjoyed very good health; became af-
terwards very sickly, and no other cause
could be assigned but the opening of the
canal. Although I have but touched
upon the general predisposing causes of
disease I must now proceed to speak of
individual predisposing causes.

Individual predisposing causes are much
more numerous than those termed

eneral, because there are many circumstances
hich may act upon isolated individuals
nd cannot be common to a great number;
hile many of the general causes if not all, such
s situation, modes of life and others, are also
ndividual predisposing causes.

The causes being very numerous, and their influ=
ce in producing disease not being the same,
shall divide them into the following series.

In this series will be classed the various con=
itions peculiar to each individual, as birth,
ge, sex, temperament, and habits.

descent from parents affected with certain
iseases, is a condition which should lead
to fear the development of similar affections.

It has been remarked by writers on pathol=
gy that "the diseases of the mother are perhaps
ore commonly transmitted than those of the
ather, not only because there is a certainty
n regard to the maternity, but also because

the female, whose part in the act of concep=
tion is equal to that of the male, supplies
from herself alone, what is requisite for
the development of the fœtus during its entire
intra-uterine existence, and also nourishes it
from her own substance through the whole
period of nursing." It is, therefore, natural
to suppose that the mother has a greater
influence than the father upon the child's
constitution, and upon its predisposition to
disease. The transmition of disease from parent
to child, is a melancholy fact too evident to
most of us to admit of any doubt, for we often
see tuberculosis developed in children under
the form of hydrocephalus, where it cannot be
referred to inflammation alone as the cause
of the effusion, but is traceable to a strumous
habit of both or one of its parents; and a post-
mortem examination verifies this conclusion.
I do not mean to say that there is no inflam-

nation of the coverings of the brain in hydrocephalus, but only that often the inflammation is the result of a previous deposition of tubercles.

The transmition of gout and other affections developing themselves at a interperiod of life is a fact which I believe is now universally admitted by writers on pathology. Age is not strictly speaking, a cause of disease. No period of life can be said to play an active part in the production of disease, but there is a greater liability to certain affections at some ages than at others. Some complaints never appear previous to or after a certain period. Many affections may be developed at all periods of our existence, from intra-uterine life to the most advanced age. Children, it has been said, are sometimes born with intermittent fever, and with variolous eruption, both of which may occur at any other age. There are, however, diseases peculiar to every age, or stage.

ate of more frequent occurrence during such pe-
riods. Hydrocephalus and Spina bifida are devel-
ped while the foetus is yet in utero. From the
first to the seventh year, the child is chiefly
exposed to the eruptive fevers, to the acci-
dents of dentition, croup, whooping cough, ra-
chitis, acute Hydrocephalus, verminous affec-
tions etc. The period of puberty in females
is fraught with various affections. In both
sexes, rapidity of growth some times dispose
the system to serious diseases. Plethrora; inflam-
matory disease, and pulmonary consumption
are more frequent in youth than at any other
age. In middle life hypochondriasis, hæm-
orrhoids, scirrhous or colloid growths, and
the greater part of organic diseases occur.
In old age, softening of the brain, deafness,
cateract etc, are more common than in
earlier life. The sexes have very little
to do in predisposing to most affections.

the mode of life has more agency in predispo-
sing to most affections than the sex alone.
Thus a man by his mode of living may render
himself effeminate and delicate, and thereby,
liable to the same diseases, to wit, (the neuro-
ses) to which females are subject under simi-
lar circumstances. Of course there are some
diseases which are peculiar to each sex, by
virtue of their anatomical structure, and
some which almost exclusively belong to
sex. Thus calculous affections and retention
of urine are confined principally to the
male sex, while femoral hernia, and hysteria
are peculiar to the female. Temperament
predisposes to various affections, and gives
a peculiar character to any that may be
developed. In the sanguine temperament,
there is a tendency to plethora, to dependent
ed inflammations, hemorrhages etc;
and almost all the acute diseases oc-

curring in such persons, are accompanied with general symptoms of inflammatory fever. The bilious temperament lead to bilious diarrhoea, the exanthemata, inflammations of the membranes and organic disease, especially cancerous degeneration. Those of a lymphatic temperament, are peculiarly liable to catarrhs, chronic discharges, and dropsy; and nearly all the acute diseases which affect them are of an adynamic character, and slow in their progress. Those of a nervous temperament are particularly subject to hysteria, hypochondriasis, convulsions, disturbances of the sensations and intellectual faculties, mania, etc; and in addition to the ordinary symptoms of acute disease various disorders of enervation, which alter the character of the affection, make it more irregular, and its termination less certain. Which are the [illegible]

known by Thomas, in regard to the various temperaments which I have mentioned. The mixed temperaments predispose according as one or the other predominate.

It must be confessed, however, that they are often so mixed that they exercise but little, if any, influence, in the predisposition to disease. Habits, which arise from the frequent repetition of the same acts in a given time, are usually injurious to those who become enslaved by them. By habits I mean certain modes of living. It has been observed, I believe, in every country, that independently of other circumstances, the mode of living peculiar to all, or to individual inhabitants, has a great effect in predisposing the body to the attack of those diseases which may be prevalent at the time. Independently of other circumstances, the particular mode of life in which

a remarkable effect upon the increase or dimmution of bodily strength; and although, in many instances, they produce no marked state of disease, yet they often influence, in a very great degree both the state of the body, and the passions of the mind. However much it may be overlooked, we generally find, that in proportion to the amount of luxury in a community, so in proportion does the health of such a community decline, and therefore, the maxim "Bene viveri et laetari" which has been suggested as a rule of action in order to promote longevity, is not a very good one to follow. It may be, great differences exist with regard to the effects of luxury upon stronger or weaker individuals; but this does not overthrow the general principle. For although irregularity may produce no immediate effect upon the health

t, the individual who indulges in it, yet
we scarcely ever, even in the most robust hab-
its, see such practices indulged in for a
long time without their evil consequences.
Indeed, where one survives such habits,
perhaps a thousand loose their lives by them
or are incapacitated from performing the
duties connected with any station in life.
Or, as a poet has well expressed it. Although
at first during such habits;

—— No sickly qualms bedim their days,
No morning admonitions shock the head,
What woes remain! Life rolls apace,
And that incurable disease old age,
In youthful bodies more severely felt,
More sternly active, shakes their blasted prime,
Except kind nature by some hasty blow
Prevent the lingering fates. For know whate'er
Beyond its natural fervour hurries on
The sanguine tide; whether the frequent bowl,

ight reasonable pace or exercise to toil
protracted, spurs to its last stage the life,
and sows the temples with untimely snow."

Thus I have enumerated
a few of the many and various causes
of disease, and as the subject is almost
inexhaustible, I will now submit what
I have written to your examination
with a consciousness of its many imperfec-
tions.

Wm Montgomery Thomas
Wilmington.

A

Clinical Report

of

Six cases of disease

Submitted to the examination

of the

Provost, Regents and Faculty

of Physic

of the University of Maryland

for the degree of

Doctor of Medicine

by

Andrew Jackson Smoot

Anne Arundel County

Maryland

1852

II Case of Pneumonia

James Kelly entered the hospital on March 3d 51. Apparently a man of good constitution, and of a full plethoric habit, aged 30 years.

From his own account he had been well until some 24 hours before, when (after some mal aise of short continuance) he experienced several distinct rigors followed by fever & a heavy uneasy sensation in his right side. He had a pulse of 100, full & strong, hot & dry skin, hurried respiration, with a painful cough and a scanty viscid & slightly rusty expectoration; tongue furred yellow & rather dry, great thirst & complete loss of appetite — his bowels had not been open for 48 hours. Upon auscultating the chest we found the respiratory murmur in the whole of the left lung and upper lobe of right pueriles, but diminished over the lower 3ds of the right lung, & a dry crepitant rale over the same space, on percussion, this side (right) was much duller than the left, which

retained its natural resonance. With these symptoms the diagnosis of acute lobar pneumonia was unmistakeable.

Treatment. Venesection ℥xx. Cups No x over right side. ℞ Hydrarg sub. mur. Pulv. Jalapa āā gr x. M S at once.

℞ Mucilage Gum Acacia O ij. Syr Papaverin ℥ij M S ad libitum.

March 4th. Bowels freely opened in the night. Rational symptoms slightly changed. Vesicular murmur & crepitant rale both absent from the lower part of right lung & perfectly dull on percussion.

℞ Hydrarg sub mur gr x, Antimonii et Potass tart grij. Pulv. Opii gr v. M et ft chart No x S one every 3 hours

March 6th. Slept well during the night. Expectorates more freely — sputa less viscid & more easily ejected from the mouth, but still retaining the rusty hue. Pulse diminished in strength & frequency. Dyspnoea

greatly relieved — vesicular murmur heard lower down, crepitant rale reappearing at the base of right lung, not so dry as before and approaching subcrepitus — Percussion gives a clearer sound, though not so clear as the left. Continue treatment.

March 7th. Cough much more frequent & expectoration freer; the other symptoms the same. ℞ Emplastrum Cantharides 4 x 5 inches, apply over the lower part of right side.

March 8th All febrile symptoms have disappeared, respiratory murmur healthy over whole of both lungs, except the lower part of right where it is modified by a subcrepitus. His mouth is a little ~~spongy~~ sore and gums somewhat spongy — breath has a mercurial odour — he complains much of debility. Ordered to stop medicine. ℞ Syr. Scillae, Tinct. Hyoscyamus ā ℥i vini Ipecac. ℥ii syr. Gum Acacia ℥ii m S ℥ss every 3

bowels, chicken & soup 3 times daily as
diet. Under this treatment he con-
tinued to improve until the 11th when
he was discharged well.

III Case of Catarrhal Croup.

John Mooney was admitted into the childrens
hospital on March 15th, aged 9 years, well
grown & of sanguine temperament, had been
for several days, previous labouring under a
slight catarrh, evidenced by hoarseness &
cough, also slight pain on swallowing.
On the evening of the same day, whilst eating
his supper he suddenly became choked as usually.
His mother suffering such was the case
endeavoured to relieve him, but finding
her efforts unsuccessful came for us.
When we arrived the following symptoms
presented themselves, anxious countenance

seemingly in[illegible] [illegible]; eyes swollen & suffused lips & tongue purple from congestion & excessive dyspnoea - voice whispering & husky. - pulse 120 moderately strong & quick. - & in addition to the above general symptoms the pathognomic respiration of Croup; consisting of long deep stridulous inspirations coming on paroxysmally - during the exacerbations amounting to almost complete asphyxia.

Venesection of the arm was attempted unsuccessfully - one or two ounces of blood having been obtained with difficulty. We next decided to open the external jugular vein which was done with the usual precautions against the admission of air in the circulation from this source ℥x was soon obtained, which had the effect of reducing the pulse & relieving the dyspnoea in a great measure.

℞ ~~[illegible]~~ Ant et Pot Tart gr ii. bini Ipecacuanhae ℨiii Gum acacia Mucilage ℥i M. s Teaspoon full every 10 minutes. Warm

bath was ordered immediately. the adminis=
tration of several doses had the effect of
producing extreme nausea, which was followed
by relaxation of the spasms & relief of all
the symptoms, Vomiting did not occur
until the above quantity had been given, when
we directed the same dose to be given at
intervals of half hour.

March 16th. Slept quite well during the
last part of the night before, there only
remains slight hoarseness, a laryngeal cough
& mucous expectoration; & on auscultation the
tubular sounds of trachea & larynx were some-
what roughened by mucous. All constitu=
tional symptoms relieved, bowels open once
during the night. Ordered the mixture
to be stopped.

℞ Hydrarg sub mur gr x pulv Ipecac gr ii
pulv Opii gr ii ft chart x. S one every
4 hours. Diet Farina 3 daily. Under this treatment he
continued to improve on the 14th was discharged well

VIII. Case of Maria A Potter

Charles Higgins entered the Cells on the morning of sept 19th 1874. aged 45, For years addicted to intemperate habits & several times previously treated for Delirium Tremens in the Alms House. I found him talking in a loud voice & seemingly defending himself from an enemy, with an anxious & disturbed countenance & manual deportment; but on my attracting, his attention, the illusion &, his fright vanished at once; his manner became calm, &, he informed me he had been drinking to great excess for more than a month, but for the last two days he had been unable to procure stimulants & for that time had been unable to sleep; had complete loss of appetite & was much annoyed by constant restlessness & occasional apparitions, which he spoke of as being unreal & the effect of his own deranged imaginations.

His pulse was 100 soft & full — skin bathed in perspiration, & rather below the natural temperature of the body. All his muscles were tremulous

& twitching irregularly, especially those of the extremities & the tongue (which was with difficulty protruded), was heavily coated with a yellow fur & moist; Excessive thirst no tenderness over the epigastrium, no vomiting - Bowels not open for 3 days.

Treatment: I directed his room to be darkened, & that quiet be preserved in the neighbouring cells & a nurse to remain with him & by a continued monotonous conversation prevent him from paying attention to his hallucinations & so calm his mind as to prepare him for sleep which is frequently induced by these means.

R) Hydrarg. sub mur. Comp. ext. colocynth ā ā gr. vi ft pilulae ij & one at once, repeat in 4 hours if necessary. R Sp'ts Vini Gal. ℥iv Tinct Opii ℥iss M a table spoon every 2 hours.

Sept 20th The efforts for producing sleep were entirely unsuccessful; frequently in paroxysms of fright & furious delirium, he would throw his body with violence on the floor & against the wall with shrieks of murder & though for

a moment his attention might be attracted it was obvious that he no longer doubted the real existence of the phantoms which haunted him. Pulse 120 small & easily compressed — skin covered with cool perspirations, having that disagreable odour peculiar to this disease, all food rejected, bowels open twice during the night.

Ordered him to be chained by 10 as to prevent him from personal violence, ℞ Tinct Assafoetida ℥j, to be added to his brandy mixture & given every 2 hours

Sept 21st. He has slept none as yet; still refuses food, the other symptoms aggravated Ordered double the quantity of Tinct Opii in prescription. Sept 22. Same state of things pulse 130 very weak, Considering the prostating delirium, vigilance & abstinence from nourishment & the obstinate refusal of the case to yield to the most generally approved remedies I determined to administer Chloroform, which was done by pouring on a handkerchief & holding to the nose, after a few moments the mus-

les contracted clonically & irregularly, the veins of the neck & face became distended, tongue protruded from the mouth & was badly cut & bruised by the irregular contraction of the muscles of the lower jaw — Salt once desisted & in a short time the patient was in the same state as before. I now had a warm bath prepared at temperature of 90 degrees into this the patient was put, struggling violently by several strong men & held so as to immerse the whole of his body & extremities, leaving his head out, he soon became quiet with the exception of a little muttering & in 35 minutes there was a diminution of 10 beats of his pulse in the minute, by which time he had become perfectly quiet & [illegible] his bedding. I now ordered him to be removed, wiped dry, & covered warmly in bed.

Sept 23d He slept until 11 o'clock this morning when he awoke was free from delirium & in a great measure from the nervous irritation. He continued to improve rapidly & on the 26th was discharged well

IV. Case of Typhoid fever.

Wm. Hall entered hospital on sept 1st – aged 35 – a labourer on a farm, robust; plethoric; sanguine temperament & temperate habits – says he has been unwell for a week previous to entering the hospital, without any violent pain, but with a general feeling of weariness & muscular soreness & an indisposition to exert himself – loss of appetite with some disgust for food – restlessness & no refreshment or diminution of the malaise after sleep. He had taken ℥j of castor oil, which had operated very freely, leaving his bowels quite loose but without any amelioration of the symptoms. The day before he had a slight chill followed by a high fever, which entirely incapacitated him for further work. On examination we found him with a dull heavy countenance; conjunctiva congested, violent headache, referred to supraorbital region, skin dry & burning hot, Pulse 100 quick & quite strong, respiration hurried, a dry hacking cough – sibilant & sonorous rales heard in

front, in the upper part of the chest on both sides, all the secretions diminished, tongue rather dry & coated with a yellow fur - great thirst, anorexia, tenderness on pressure in right illiac fossa with gurgling. The sense of hearing was much obtunded - his mental & physical faculties seemed shackled & oppressed - it was necessary for us to speak in a loud voice to attract his attention & frequently to repeat it in order to be understood.

Treatment, venesection ℥x - apply 4 cups to nucha: Ice water ad libitum, rest in recumbent position, lightly covered,

℞, Sodae bicarb ℥iii. Potassae nitratis ℥i, vini Ipecac ℥iii aquae Cinnamomi ℥iii M S Table spoonfull every 3 hours. Lemonade Oij daily.

Sept 24, yesterday his head was much relieved by the bleeding, but soon became as bad as ever; Today his pulse is 110 not so strong as yesterday the other symptoms the same. Continue treatment - directing also his whole surface to be

frequently sponged with cold water.

For the next five days the same state of things existed with this exception that all the symptoms became more Typhous. Treatment continued.

Sept 14th. Pulse 125 very feeble, surface of the tongue covered with a dark dry fur, glazed at the tip & edges – abdomen somewhat distended with flatus, several rose coloured papulae found in the Epigastric & Hypochondriac regions, which disappeared on pressure but returned as soon as it was removed the other symptoms before enumerated continue Discontinue former prescriptions. ℞ Sol: Ammoniae Acetatis ℥viii S ℥ss every 3 hours – ℞ milk punch Ozs S Table spoonfull every 3 hours alternating with the above; continue cold sponging.

For the next 3 days the symptoms continued to increase in violence daily showing a more Typhous grade. Dark sordes became encrusted on his teeth Gums & lips, his tongue cracked, tympanitis excessive, has some 8 or 10 passages a day of a dark offensive character. A strong urinous odour exhales from

the surface of his whole body, skin covered with sudamina, nervous debility increased & other nervous symptoms, such as sensitiveness of skin, irregular twitchings & low muttering delerium, developed themselves - extremities cold - pulse 145:

Continue milk punch - stop spts Mendoreris ℞ Ol: Terebinthinae ℥ss. Syr Gum acacia ℥iss M. S. half ounce every 4 hours.

Sept 12th - Tongue moist at the tip & edges, throwing off fur at the tip, Tympanitis diminished - diarrhea slightly checked. Pulse fell to 125 & stronger - skin not so hot or dry - nervous symptoms diminished, Rose spots & sudamina still remain in a less degree. Continue treatment

Sept 15th. All the symptoms improved tongue moist & rapidly clearing, thirst diminished & appetite improved, stools more healthy & not so frequent, tympanitis disappeared, but the tenderness remains, skin moister & nearly the natural temperature, no traces of the eruption, great debility & emaciation - no delerium, twitchings or

morbid sensitiveness; Complains of a slight headache, countenance more intelligent, a slight Bronchitis still remains. Discontinue the punch – continue Prescription. ℞ Mist: Spiritus vini gallici ℥xii, S ℥ii every 4 hours. This treatment was continued until the 25th, when all febrile symptoms having disappeared, the diarrhoea being checked & nothing remaining but debility and emaciation; the Turpentine was stopped, the Brandy mixture given only 3 times daily, & generous diet allowed; He continued to improve rapidly and on the 5th of October was discharged well

V

## Case of Jaundice

John Schmidt, was admitted into hospital on 20th, August, aged 30 years, Occupation, & Weaving – From Fells point Baltimore; Says he had been perfectly healthy until about a month ago, when he was taken with nausea

loss of appetite, constipation & an indisposition to make any bodily exertion, a feeling of constant fatigue & depression of spirits; About a week before coming to the Alms House, he had noticed a yellowish hue of his skin, which had gradually increased. His skin was of a dark yellow colour, harsh & dry; tongue moist with long yellow fur, bowels not open for 4 days. Linen stained yellow. Urine of a dark yellow colour. Pulse 100 & weak. Diagnosis jaundice from congestion of liver. Treatment; Apply 4 cups over the region of the liver. Take ten grains of calomel & follow by ℥j of castor oil in 4 hours August 21st. Today he appears the same as yesterday, the medicine opperated three times during the night, the two first stools were of a light clay colour, the last of a brownish colour. R, Hydrarg: sub. Mur, gr xii, Pulv: Rhei gr xii, ft Pulv: xii. S one three times daily. Arrow root for breakfast & supper milk for dinner.

August 24th. Today his skin is much clearer as are also his eyes, skin soft & slightly moist, countenance more natural, tongue tile slightly furred yellow & moist, tenderness & pain in the side entirely disappeared, stools nearly natural. Continue Medicine.

August 26th. Today all the symptoms are greatly improved, the skin & conjunctiva have nearly regained their natural colour, the tongue perfectly clean, stools rather darker than natural. ℞ Mass. Hydrargyri gr x Pulv. Rhei gr x ft pilulae 1 sane every night.

Chicken & soup for dinner, Milk for breakfast & supper.

Under this treatment he continued to improve rapidly & on the 2d of Sept. was discharged well

VI Case of Typhus Fever

Susan Parsons aged 45 years was admitted into the Ward on the 10th of January 1850. Of good constitution and plethoric habit.

She informed us that, for ten days last she had been suffering greatly with a violent headache, pain in her lower extremities: that she had no appetite: that her bowels had not been open for a week past and that on the evening before she experienced a severe chill followed by a high fever.

We found her with a pulse of 120 full but easily compressed, eyes very much congested, face of a livid red, skin burning hot & dry, features fixed & expressive only of indifference, upon auscultating the chest a slight bronchial roughness was perceptible, tongue moist & coated with a light yellow fur, urine scanty & high coloured

Prescription. Take an ounce of Oleum Ricini at once: Table spoonfuls of Neutral mixture of Pharmacopia every 3 hours: Apply 4 cups

to the Mucha.

January 13th " Up to this time all the symptoms have been gradually increasing in intensity, the Oil appeared once only, her bowels were open yesterday by thirty grains of Rhubarb; stools of a dark bilious character and very offensive. Pulse 150 small and very easily compressed tongue covered with dark sordes; tongue brown dry & cracked; eyes excessively congested; her face of a dark purple colour; skin dry burning hot and mottled with dark livid spots over her arms and nearly the whole of her body, which were not elevated above the surface of the skin and which did not disappear on pressure She has been delerious for 24 hours & takes notice of nothing. It is with great difficulty she can be made take her medicine, and the nurse informed me that she was near being strangled twice while taking water. There is an excessively disagreable odour about her bed, and her breath is insupportably noxious

℞ Brandy mixture ℥vi iii S Table spoon full every hour, Beef tea 3 times daily. Lemonade ad libitum, Ordered her skin to be sponged three times daily with tepid water & vinegar, her mouth to be washed also.

Jan. 14th To-day her pulse is scarcely perceptible her extremeties cyanosed & cold, passive haemorage from the nose; bowels open every half hour; stools copious & of a dark bilious character, somewhat resembling coffee grounds, Inferring from this that Maloena of a passive character was going on, we ordered with a continuance of the brandy.

Oleum Terebinthinae ʒii Tinct. Opii ʒii Syr. gum Acacia ℥vi ss M S Table spoon full every 3 hours. Continue Beef tea.

January 15th Today her bowels are somewhat checked pulse very frequent & weak but much stronger than yesterday; Tongue dry & cracked nearly black the other symptoms same as yesterday.

Continue Medicine.

January 17th Today she appears much better her skin is not near so hot & is slightly moist; tongue has nearly cleaned and is moist; pulse is so much stronger; her intelligence has in a great measure returned and she begins to take notice of what is going on: her bowels were open once today. stool natural in appearance, Continue treatment

Jan 20th All Typhus symptoms have entirely disappeared; her appetite has returned & she is suffering only from debility.

We ordered her medicine & brandy to be stopped. & two bottles of Porter daily with the best diet the house could afford. She improved rapidly and on the 1st of February was discharged well

An

Inaugural Dissertation

on

Asthma

Submitted for Examination

To The

Provost Regents and Faculty of Medicine

Of The

University of Maryland

For The

Degree of Doctor of Medicine

By Wm L Willis

of Maryland

1852

Gentlemen

In reviewing my Studies I find no disease that strikes me more forcibly in its phenomena and peculiarities than Asthma there are but few diseases which cause more dread and anxiety to its victim than the subject of this Essay. These qualities of the Affection I think should eminently entitle it to the careful notice of the Student of the healing art, and whether Curiosity prompts his inquiries in to its nature or philanthropy or ambition of distinction — Stimulate him patiently to observe its phenomena, with a view of discussing the treatment that will disarm it of its much dreaded power of Continuing or returning we know of few subjects within the wide range of our particular field for investigation which offers him a better opportunity for gratifying his motives than the present Subject.

Phenomena and Progress of the Paroxysm.
This disease which was known to the Greeks and Romans and which by them has been well discussed, is usualy divided in 3 Classes or varieties, The Spasmodic or Convulsive Asthma the most Common variety - which attacks all temperaments, but more frequently the melancholic, is the variety to which I shall draw your attention more particularly; There is often some degree of warning given of the approach of an Asthmatic paroxysm, not however by thoracic Symptoms but by those of indigestion; heartburn - flatus, itching of the skin - pain over the Eyes and Sleepiness; the attack generally occurs at night and the patient may be aroused from his Sleep by a severe paroxysm. To those who experience or witness a paroxysm of Asthma for the first time, it appears one of the most formidable diseases to which man is liable, the patient is

oppressed by a tightness across the breast which so impedes respiration as to threaten immediate death. He starts up into an erect posture and flies perhaps to a window for air, for some time this breathing is performed with great difficulty, he gasps slowly and with a wheezing noise, speaking is painful and difficult to him and there is also a disposition to cough. In this state of deep distress the patient continues till the approach of morning, a remission then generally taking place. However suddenly the fit may begin it will have left slowly and by degrees; the breathing becoming less laborious the coughing and wheezing less performed with greater comfort. In the generality of cases a copious expectoration commences (according to Rees it is sometimes blackish at others sweet or saline or slightly tinged with blood) at length

takes place and with it the paroxysm ceases and the patient falls asleep. During the paroxysm the pulse and heart usually continue of the natural standard; the surface of the body is pale, the muscles appear shrunk and there is a considerable flow of limpid urine in many cases according to Bree; in some cases expectoration is not so copious as in others, this which in itself is regarded as of little importance, was by the humoral pathologist, advanced to a distinguished rank among the symptoms of the disease and formed the ground work of its division into the two species of dry and humid asthma. But to continue with the paroxysm During the next day the patient experiences some remaining sense of stricture across the breast and every exertion of the body increases his uneasiness. At night the distressing difficulty of breathing returns and in this manner he is tormented

for three or four days, the Symptoms becoming, each day milder and soon the Symptoms gradually yielding, he enjoys his usual rest without further disturbance. One of the most striking peculiarities of this disease is that once it attacks a person it is very apt to recur periodically; and when the asthmatic disposition is very strong, to be brought on at all times, by some of the circumstances which I shall presently enumerate; I have previously, to observe however, that a degree of difficulty of breathing, particularly in ascending a hill or flight of steps is never wanting. Among the intervals and respiration is always attended more or less with wheezing, caused by a morbid accumulation of mucous in the bronchial tubes. Persons subject to this disease acquire a peculiar expression of countenance easily recognised when once observed. Predisposition & the Predisposing causes to this disease little is known, whether correctly or not, I know not, but it has been

ranked as an hereditary Complaint, not Confined to any particular age or Sex, the period of youth and manhood being most prone to it. It may sometimes be connected with a deformed Chest—the asthmatic disposition generally exists along with other marks of an irritable Constitution, this general principle prevades the whole pathology of asthma; Exciting Causes, In many cases the Exciting Causes of the paroxysm are sufficiently perceptible and exhibit the most singular varieties; Dr. Bree Considers them as qualified by their importance to become the basis of a practical division of asthmatic cases; and he refuses to acknowledge any difference in the phenomena of the asthmatic paroxysm calculated to attain this object, From this we may learn to estimate the Claims upon our attention which the Exciting Causes of asthma possess. In the predisposed, an asthmatic paroxysm is frequently the result of particular States

of the atmosphere, varying however in different Cases; one man finds his breathing easy in the most Crowded and Smoky parts of the City and has a paroxysm the moment he returns into the pure air of the Country; Some asthmatics can go with impunity into a hot and Crowded room, while others would Shun them as the sure prelude to a paroxysm, Some have their fits in Summer and then dread the approach of Winter, - various Kinds of irritating matters Conveyed to the lungs by the air and occasioning a fit of Sneezing will in those predisposed to asthma bring on a paroxysm; perfumes, Tobacco Smoke, Cast and vapours of Sulphur, have had their effect in many Cases, Asthma may often be occasioned by whatever quickens the motion of the blood generally or determines it particularly to the lungs; Such as severe exercise hard speaking Exposure to cold, and suppressed Evacuations.

Asthma may occasionally be induced by causes which cannot operate but through the medium of the nervous system, such as the anxieties of business or the exertion of deep thought. A very frequent and important cause of the asthmatic paroxysm is a loaded, wandering or otherwise disordered state of the stomach and bowels, we cannot feel surprised at this when we reflect how generally dyspeptic persons, having no asthmatic diathesis, complain of difficult breathing, especially in the horizontal position, this requiring the same treatment as asthma - vomiting, and hanging fasting drinking largely of spirituous or fermented liquors, of tea; Eating between meals, all foods of difficult digestion; as smoked meats, pastry fat pork, beef or oily foods; raw vegetables should be avoided, for they may be the cause of producing a fit of asthma. I have already stated that I had occasion to allude to the

great law of Convulsive motion, namely That whatever be its origin the certain consequence of its repeated attacks will be that increased mobility of the whole frame which occasions a renewal of diseased action by the mere force of habit. This principle is particularly applicable to asthma, which fixes itself in the constitution with an inveteracy equalled only by that of epilepsy, yet with all this asthma cannot be considered as a disease of danger; no case being on record where it proved fatal, and though it assuredly in some cases lays the foundation for other diseases, yet this is not frequent; many confirmed asthmatics have accordingly attained a good old age; the gradual inroads however, which, when uncontrolled, it makes upon the constitution would entirely all the enjoyments of life and should be sufficient to induce the patient to submit to any privations that may be necessary

towards this cause; & Pathologists in all ages have exerted their ingenuity in determining if possible the precise seat of this disease and its proximate nature or proximate Cause; much labour and time have been given to both questions, but as yet they are still involved in considerable obscurity the bronchial tubes have usually been considered as the primary seat of Asthma; but a difficulty has been experienced in reconciling the notion of Spasmodic contraction, with the peculiar anatomical structure, nor does this appear to have been without cause. In the exquisite form of the Asthmatic paroxysm if it may be allowed so to term it, every muscle that can assist in respiration is affected, the important question however upon which Pathologists have divided, is whether the Spasmodic action existing in some one of the structures about the chest be the cause of the consequent difficult respiration

mucus in the bronchial tubes which all admit to constitute so material a part in the phenomena of the asthmatic paroxysm, Dr. Cullen contends that it is the cause; that the spasm is the primary feature of this disease and the effusion of mucus the natural relief of such diseased action, Dr. Rue on the other hand joins with the old humoral pathologists in maintaining, that the convulsive efforts of the asthmatic, are only secondary phenomena being set up with the view of throwing off an excessive secretion from the mucous membrane of the bronchia; this will conclude the question of speculation, Diagnosis asthma is distinguished from Catarrh by there being no fever and the fits being spasmodic and occuring at long intervals in the former; Catarrh seldom ends in asthma but often in phthisis. The paroxysm of asthma and apoplexy are closely allied, the drowsiness in asthma being,

produced by the retardation of the return of the venous blood from the vessels of the head to the right side of the heart by the effussion of serum or the infarction of blood in the lungs; asthma may end in apoplexy and the conformation of body which produces one, leads to the other, the same effusion into the lungs may cause delirium and insanity. Asthma may sometimes be introduced into the habit by intermittents, they produce an effusion into the chest and thus producing Asthma, these combinations are rather important as they lead to a various exhibitions of remedies, more particularly too, as asthma is a disease which may exist from the slightest difficulty of respiration up to its most desperate spasmodic form and from a variety of causes as before stated. Withers speaks of pains occurring in the knees, after asthma and advises that no remedy should be used to cure them as the asthma will

be increased; this disease is a Problem which a thorough Knowledge of its Causes, Symptoms and Treatment only Can Subdue. Insanity, Consumption, Dropsy and Asthma are often Convertible diseases, The Connection of diseases of the Head with Asthma is Shown in the drowsiness which attends it. and from the fact that Asthma occurs more frequently during Sleep, a Fact, which is connected with an increased fulness of the Vessels of the Head, this observation is important; as by an active Employment of the Senses and preventing Sleep the fit Can be kept off for Several nights, the Same is true of Epilepsy which occurs in the night, thus if this last disease attacks before the Senses are lost in Sleep the patient by waking Can prevent it, an important observation as it points to the Cause of both these diseases, fulness of the Vessels of the head,

which is of course to be assisted in order
to relieve them; as soon therefore as numbness
or pain in the hands or other parts comes
on the patient will be relieved by being aroused.
Asthma may be distinguished from Pleurisy,
by the great pain in the side, breast or between
the shoulders, the high pulse, increased
respiration, the general fever, and the stitch
cough which distinguishes the latter.
Asthma may however sometimes be combined
with pleurisy, then it presents a formidable
appearance and requires an accurate
knowledge of the Symptoms of both, to form
an accurate diagnosis. Asthma is distinguished
from Peri Pneumonya notha or Catarrhus
Bronchiorum by the mild and apparently
harmless Symptoms which introduce
the pneumony: Asthma is more sudden
in its coming on as the other, often
sleeping; In the Catarrhus bronchiorum

There is a dull, deep seated pain, in the breast increased by Coughing, not to be found in asthma. Those who have this Peripneumony are generally of a phlegmatic habit inclining to dropsy, subject to Catarrhs and wintry Coughs. The latter disease is however not periodical, the diaphragm also descends more easily than in asthma, generally in asthma the difficulty of breathing often abates very considerably and sometimes entirely. Cases before any Expectoration takes place. In the false Peripneumony a copious Expectation coming on affords great relief, though without any sudden abatement of the symptoms. The first paroxysms of asthma are very short and the succeeding ones generally continue days and the recovery is much slower and more difficult.

Prognosis. This depends in a great measure upon the duration of the disease, if

instead of six to eight-hours it continues two or three days; if spasms of the chest are violent; if the disorder be of long continuance if it returns frequently with laborious breathing; if it proceed from tubercles or malformation of the chest and occur in a weakened subject, worn out constitution, with a scrofulous habit, the disease is more or less unfavourable according to intensity of each of these symptoms to the strength and age of the patient; if the attack on the contrary be recent and there be no natural deformity, the breathing free after the paroxysm and the cough with expectoration not violent nor obstinate in its duration, if all the causes exciting it can be removed and there be no radical defect of constitution as scrofula or consumption, the case is in proportion favourable. Sometimes the disease ends critically by diarrhea ulcerations &c; if the diarrhea be moderate and the patient

not too weak it may be supposed to continue for a short time though generally it is dangerous and should be arrested by opiates and mild astringents;

Treatment. The treatment of asthma divides itself like that of intermittent in to two great heads palliative and radical or that which is pursued during the paroxysm and in the interval; the relative importance of them were long misunderstood. Dr. Bullen distinctly says, that asthma is seldom cured though it admits of alleviation, Dr. Bree on the other hand has shown that the paroxysm of asthma is susceptible of but little relief and that the main object of medical treatment is to prevent the recurrence of fits and the mode to effect a permanent cure of the disease

During the paroxysm the indications of cure are to lessen the distension of the blood vessels of the lungs and to promote expectoration.

bloodletting should seldom be resorted to in these cases as it has a tendency to delay expectoration and aggravate the subsequent dyspnea and to increase that debility which is the great obstacle to a speedy and ultimate cure, In place of the dangerous treatment of bloodletting then we use to relax the spasm and unload the vessels the combined influence of nauseants, expectorants and narcotics. When the stomach is much loaded as when the paroxysm occurs soon after a full meal we may commence by directing a gentle emetic.

℞ Pulv Rad Ipecac gr xv

Acet. Scillae ℥ i

Dr. Bree says the value of the squill and vinegar cannot be sufficiently estimated. Vomiting however should not be violent as it will protract the paroxysm: it will be sufficient in ordinary circumstances however to keep up.

a nauseant effect by giving ℞ Pulvis Ipecac gr iij
Acet. distillat ℥ iij
Aquae Menth ℥ v—

every three or four hours, If there be suspicion of acidity in the Stomach we should give chalk and Ipecac in small doses. On the third or fourth day when the tendency to secretion has increased, some anodyne may be added to the Expectorant and this mixture may be aided by the gentle stimulus of an acid. Dr Bree states that antispasmodics are useful only when the disease has existed long, when the paroxysm recurs from habit and sympathy and when our object is mainly to vary impressions, in this state, Opium combined with Ether is a very excellent medicine as the paroxysm so frequently arises from disordered state of the Stomach and bowels; the employment of Laxatives during the fit affords an obvious means of

relief in some cases the action of a purgative carries off the fit but when purging is advisable it should be attempted by giving Rhubarb, Castor Oil and other medicines as mild in their action. Dr Rose recommends chalk and Rhubarb. the cold bath has been recommended as a powerful means of directly checking the asthmatic paroxysm; where the Constitution is vigorous, it may occasionally be advisable, to employ it, but not otherwise. During the intervals of the paroxysm attention should be principally paid to the careful avoidance of all the exciting causes of the disease, attempts are to be made also to give tone to the capillary vessels of the lungs and to promote the strength of the Stomach and

general System. To enter upon such a plan with any prospect of success a coöperation on the part of the patient is indispensable - his health is in his own hands in a great measure. To aid the efforts of the asthmatic preparations of Iron bitters and the mineral acids may be advised. Dr. Bree recommends a teaspoonful of the Carbonate of Iron three times a day or.

℞ Carb. Ferri gr. x. ℈.
Pulvis rhei ʒ ss
Ol. Anthemi gtt. i
M. ft. Pills xx
Take 3 night and morning

The nitric acid treatment lately recommended by Dr. J. A. Hoskins of Georgia has proved, in his hands to be one of the most potent remedies

that has ever been revealed to the medical Profession, he speaks of five cases in the Stethoscope & Virginia medical Gazette as having been cured by its use. Three to five drops of nitric acid having been given three times a day.

Diet and Regimen. Cold bathing daily and well regulated Exercise and when convenient frequent change of air, & some and of amusement, are of Real importance, But above all things attention is to be paid to the regulation of diet. Light and simple food is to be frequently and sparingly taken and that in moderation; with these precautions many confirmed consumptives may live through life in comparative comfort. when the disease is moderate during

chance of permanent cure lies in a complete change in all the habits of life.

Thesis

Inaugural Dissertation

On Circulation

Submitted to the Examination

of the

Board of Regents & Faculty

of Physic

of the

University of Maryland

for the

Degree of Doctor of Medicine

By

Thomas William Perry Rider

Somerset County

Maryland

# Scarlatina

[T]his disease derives its name from the [p]eculiarly florid appearance of the skin [b]y which it is usually accompanied. The [de]nomination, Scarlatina; was first applied [te]chnically, and introduced as a professional [te]rm, into the medical vocabulary, I [b]elieve, by Sydenham; although the term [it]self is Italian, and was long as a vernacular [n]ame, in use on the shores of the Mediterranean [be]fore it was admitted into English nosology. [I]t is a term which has been assailed on all [si]des, as barbarous and unclassical, by [s]trictly nosological writers, and is a matter [wi]th them of no small wonder; that it should [h]itherto never have given way to the name [r]osalia, of genuine Latin derivation. Some [w]riters, (among them, Morton) have had so [gr]eat an aversion to the term, that they [pr]eferred the error of blending scarlet fever [w]ith measles, and of arranging the varieties

& the two diseases, under the common gen
name of morbilli; Hoxam for a long ti
avoided it by using "febris miliaris rubra
or maligna" for some of the varieties of Scar
fever, and "febris miliaris anginosa" for othe
and Heberden has still more recently
employed "febris rubra" Willan continue
Scarlatina but thinks it necessary to
apologize for its continuance. "The denomina
scarlatina" says he was first applied to t
disease by British writers, however offensi
the term may be to a classical ear, it
cannot, will not be displaced, having fou
admission into all the systems of nosology
& shall adopt the apology of Willan, and ad
the more familiar designation of Scarlatina
notwithstanding according to Mason Good
more elegant and classical name Exanthesis
Rosalia. Doubtless Scarlatina is a disea
of modern date, certain passages have bee
cited from some of the ancient writings, thou
to refer to this, which on a more careful examin

will not bear such an interpretation. Its introduction into Europe is commonly traced to an importation from Africa, and is said to have first broke out in Spain in sixteen hundred and ten whence it spread to Naples, where it prevailed eight years afterwards as an epidemic with unexampled violence, ten thousand persons are said to have perished of it in that City and half a million in the Neapolitan & adjacent territories, before its cessation. By Sydenham and subsequently Morton, some account was given of it as prevailing in London in sixteen hundred and eighty nine, but so vaguely do their descriptions run that they can hardly be supposed to refer to the same disease. A little more than a century ago, it made its appearance in the New England States, gradually diffusing itself to a greater or less extent over this Continent. Much confusion however exists in the history of the disease owing to the want of a just discrimination on the part of those in whom it was described and officially at an early period, no distinction is made

in most of those records between it and measles,
even small pox, except as to gradation of violence; a
so lately as the time of Morton and even of Wat
the latter of whom wrote about the middle of
the last century, the identity of it and measle
was maintained, Withering's publication of it in
seventeen hundred and ninety three may be consi
as the date of the absolutely correct diagnosis of
disease. No inconsiderable share of attention is
Scarlatina received, to which it is justly entitle
being frequent in its resultations, extensive in its
prevalence, and often exceedingly fatal in its ra
By some writers it is stated that the malady
prevails more in Winter and Spring, than in Sum
and Autumn; although it exists at all seasons
and often with equal violence in the several
seasons indiscriminately. An eminent physici
of this City informed me that according to his
observation, Epidemic Scarlatina was apt to
prevail extensively in wet Autumns succeedin
a hot Summers, and in mild and dry
Winters. It occurs more frequently in the early

low in the advanced periods of life, + it is said
females, than in males; so that childhood and
e female sex appear to be more predisposed to
e disease than manhood and the male sex, From
e fact that Scarlatina mostly exists as an Epidemic
infection has been assigned to the hidden
d mysterious agency of such diseases, but
however its propagation be promoted or its Character
flected by an influence of this kind, there can
be but little doubt that its immediate Cause is a
Specific Contagion, conforming in this + other respects
the diseases to which it is most closely allied.
In these it destroys the Susceptibility to a second
attack, although it is no uncommon event, to see
attendants on the sick, who have previously had
the disease, affected with sore throat, without
eruption; it is proper to admit, that respectable
writers, aver that a second + third repetition of eruptive
scarlet fever may occur, The physician before referred
to, + whose observation has been large, informs me
that he has seen none such in his practice; considering
the resemblance of several eruptions attended with fever

and the uncertainty of the diagnosis it may be conjectured that not a few of the alleged repetitions were not really such, the antecedent or subsequent attack being Roseola or some other of the immitative eruptions. But admitting the fact of such recurrence Scarlatina still rests in this respect on the same foundation with Variola, and other diseases of acknowledged contagiousness. It certainly however appears not to be very strongly contagious as great numbers in every community seem to be insusceptible to its cause. It not unfrequently happens that a single individual in a family becomes affected, although other members are exposed to the contagion during the whole course of the disease. Some Authors doubt its contagiousness and explain its original spread on the principle of Epidemic influence. Whether the contagious property is possessed by the disease throughout its course or at any particular period, does not seem to have been determined. Some suppose that it is retained by the individual during convalescence and long

terwards. and that contagion may exist in fomites
r weeks, or months. It is generally conceded that
would be hazardous to expose the susceptible
it, during any period of the desquamation,
nd well attested cases are numerous in
hich the disease has been communicated
entering a ward of a hospital, or a chamber
which the disease had existed many weeks
reviously — As to the Sphere in which the
ntagion of Scarlatina operates, I have been
nable to obtain any positive information
ut it may be presumed to be like most other
iseases of the same nature, very limited.
The incubative period of the contagion is
aid to be from two days to three weeks.
robably from five to ten days, in general.
— Most nosologists divide Scarlatina into
three varieties — Scarlatina Simplex, Anginosa
nd Maligna, to which some have added
nothers, Scarlatina Sine Eruptione, and
ave described each so precisely, that the
tudent might be very readily led into the

error of supposing them to be equally distinct in nature. It is not necessary to enter upon a discussion to prove the identity of these several varieties, for they are produced by the same cause, and are often blended together, so that it would be entirely impossible to determine to which of them a particular case might belong. They often exist in a family in all the grades at the same time. I cannot see therefore that there is any better reason for dividing Scarlet fever into varieties, than most other febrile diseases, which are equally marked by gradation of violence, or occasional deviation in some important Symptom. I believe with Dr Dulin of this City, that a more simple (and he says correct) division of the Subject and particularly as concerns practical convenience would be to treat of it as inflammatory and passively congestive. An attack of the inflammatory form of the disease is usually preceded by langour, weariness, rigors & pain in the back & limbs, gastric disturbance and

cordial anxiety. The fever sets in with a
markable acceleration, of pulse, hot dry skin,
lushed face, furred tongue, anorexia, thirst &
musical muscular weakness. Often there are
nused and vomiting, also more or less headache,
d other symptoms of nervous disturbance, such
restlessness, morbid vigilance, delirium, stupor
ma, or convulsions. On relation to the severity
the fever, it will be found of every possible grade,
m, a mildness scarcely amounting to disease,
to the highest point of violence and danger.
Contemporary, or nearly so, with the above
henomena, soreness of throat, rigidity of the jaws
d difficulty of swallowing are sometimes, though
t invariably, complained of; and on examination,
dness & swelling of nearly the whole of the lining
embrane of the fauces may be perceived. When,
e Anginose state is prominent, the affection of the
roat, will be seen, to have correspondingly
augmented, the velum, pendulum, palati, uvula,
nsels, and in short the whole of the fauces are
tensely florid and tumified; which state extending

up the Eustachian tubes, hearing is impaired
& severe Earache often induced, sometimes pa
of a concrete exudation, resembling false mem
of a dirty white, yellowish or ash colour, may b
seen covering the surface of the fauces and
spreading into the pharynx, Formerly they
were thought to be the surfaces of ulcers or
gangrenous portions of the mucous membrane
but when scraped off they leave the surfac
for the most part reddened and without
organic change; occasionally they extend int
the larynx producing the symptoms of pseud
membranous croup; sometimes, however they
do cover ulcerated or eroded surfaces and
may even be gangrenous, often imparting
very offensive odour to the breath; Accompa
the interior disease, there is almost always
more or less tumefaction of the external part
having its seat in the cellular tissue or
lymphatic glands, the external swelling is h
and painful. + sometimes prevents the patient
from opening his mouth so far as to permit

section of the fauces. Deglutition is painful &
difficult and when attempts are made to Swallow
fluids they occasionally return through the nostrils.
The patient is often very much annoyed with a
viscious mucous secreted in the fauces, which
cannot well Swallow & which he finds difficult
to discharge from the mouth; very frequently the
lining membrane of the nostrils partakes of the
disease, the nasal passages are closed by the
consequent Swelling and the crusts which
form upon their Surface and the patient is
compelled to breathe exclusively through the
mouth, producing dryness of the tongue and lips.
At a more advanced Stage a yellow & exceedingly
offensive liquid is sometimes discharged from the
nostrils, which is occasionally very acrid and
excoriating, a similar secretion from the fauces
is Swallowed and probably occasions irritation
of the Stomach & the induction of diarrhoea, which
are occasional features of the disease towards
its close. Sometimes when Swelling has been
considerable about the neck, recovery is postponed

by the Suppuration, which ensues and various
secondary affections are apt to result which protract
the disease and add much to its danger. The
tongue in the early stage is generally coated
with a white or yellowish-white fur exhibiting
sometimes projecting papillæ upon its surface
and is red at the tip and edges, it is apt to
lose its fur at an early period, becoming deep
red, smooth, & glossy or somewhat rough with
papillary enlargement. The eruption appears
in most instances on the second day of the fever
often, however it is longer delayed, sometimes
even to the fourth day, whilst in other cases
its occurrence is exceedingly sudden, with
scarcely any premonition, and may indeed be
the earliest manifestation of the malady; it occurs
first on the neck and face, and then successively
on the trunk and extremities, it becomes very
conspicuous about the loins, bending of the joints
and on the hands & fingers, which become stiff and
swollen, it occupies generally about twenty four
hours in its diffusion. As to the diffusiveness

of the eruption, there is great difference. Sometimes it is scattered in points here and there, and sometimes patches of limited extent are presented, but much more frequently it covers in a greater or less degree the whole body, being either uniformly diffused over the surface, or exhibiting this uniformity in certain parts, while in others it is in small points or patches. The efflorescence consists at first of innumerable red points or spots seperated by interstices of skin of the natural colour, these small spots quickly coalesce, so that in the course of a few hours, the redness is pretty generally diffused. It disappears under pressure, and returns when the pressure is removed. Whatever augments the general excitement, has a tendency to deepen it; hence during the exacerbations of fever, which generally in the place towards evening & at night, it is increased. The reddened surface is generally smooth to the touch, the efflorescence being in no degree perceptibly elevated; occasionally it is accompanied with a feeling of roughness

which is not evident upon the extremities and front of the body; it gives the sensation as if the skin were covered with granules and arises in consequence of enlargement of the cutaneous papillæ, While the congestion of the cutaneous vessels is very intense and particularly when the patient has been subjected to an exacting regimen during the treatment, small miliary vesicles sometimes appear on different parts, more frequently on the trunk, The cutaneous affection is attended with a sense of burning itching or other irritation, which is often very annoying to the patient and interferes seriously with sleep. The fever is not very sensibly influenced by the appearance of the rash, Sometimes, however it abates, with great relief to the stomach and head, though often it is otherwise + may be increased, The skin is dry and burning hot, the temperature rises to one hundred + six or eight.; on the second or third day the thirst becomes urgent + the tongue, more especially at its tips + edges, assumes a scarlet hue

while its papillæ are much enlarged), On the
approach of evening there is an increase, & fever
with extreme restlessness & often delirium during
the night and sometimes comatose symptoms.
The disease attains its height usually from
the fifth to the ninth day, when in favourable
cases all the symptoms begin to subside; the
rash fades, the miliary vesicles disappear,
the heat of the skin, diminishes, the pulse
becomes slower and fuller, the throat affection,
abates and the tongue, if it has not previously
thrown off its fur, does so now; often however
remaining for sometime reddish, glossy and
with prominent papillæ), Occasionally however
some sore throat and some degree of fever
continue for a week, or ten days after subsidence
of the eruption, Sometimes the amendment is
accompanied with a profuse perspiration,
or a diarrhœa, which may be regarded
as critical, but they are now often absent.
The efflorescence in Scarlatina commonly
terminates by desquammation of the cuticle,

which begins about the end of the fifth day or later, on those parts on which the eruption first appeared and gradually proceeding over the body in the order in which the rash came out. The desquammation, from the face neck & trunk, is usually furfuraceous, while large portions of cuticle are detached from the hands & feet, and occasionally the cuticle from the palm & fingers & soles of the feet separate entirely, so as to form a complete mould of each. The process of desquammation is often attended with very troublesome irritation, & itching, & sometimes with much tenderness of the skin, it is usually completed by the end of the second week, though sometimes delayed longer in consequence of a succession of exfoliations. If no untoward complications have occurred, the patient may be considered well, though not exempt from liability to unpleasant & even dangerous sequalæ. The course of the disease is often much less favourable; from the beginning to the close it is not free from danger. Death

sometimes takes place in the first stage, even before reaction from the overwhelming force of the shock upon the nervous system & at any subsequent period the patient is liable to the same result from coma or other violent cerebral affections, which may leave no organic trace behind it.

Inflammation often attacks some vital part especially one of the serous tissues with fatal effect. Disease of the stomach & bowels sometimes carries off the patient, he may also sink from exhaustion consequent upon the malignant character of the affection, the occurrence of gangrene of the throat, or the exhausting purulent discharges incident to local affections, which often remain after the proper disease has passed away.

Congestive Scarlatina. Though retaining the common characteristics of the disease, presents the complexional hue, which is always heightened by the operation of the zymotic influence in contact. It commences with many of the initiatory phenomena noticed under the preceding head; the peculiarities of this mode of attack are soon manifested, in the most

part reaction is exceedingly feeble or imperfect and may not at all take place. The collapsed state is marked by a weak pulse; cold skin, and dough countenance, the head rather stupid than aching the stomach dreadfully disordered, the respiration laboured, with deep sighs; the whole attenuated extreme debility and a disposition to syncope. It often happens however that the system emerges from such oppression, or being less severely displayed by a free, soft, compressible pulse or intensely hot dry skin, with pain in the head suffused eyes, turgid countenance of a somewhat purplish hue, tenderness of the epigastrium, or lower portion of the abdomen, accompanied by vomiting or purging or both. But this excitement usually evanescent, is succeeded by a sudden and alarming prostration of the vital forces. The eruption is exceedingly variable as to the time of its appearance & duration. Sometimes it does not appear, & the patient sinks without it. Often, it comes out later than the inflammatory & disappears after a few hours or it vanishes suddenly

and is again renewed) several times in the course of the disorder; or patches of a pale, rapidly changing to a mahogany, or livid purple colour, become widely diffused. As the disease advances the typhoid condition becomes more confirmed, the face is bloated & may be livid, the eyes suffused as in inebriation, the intellectual faculties depressed by low delirium, attended by nervous tremors & automatic movements of the hands. Convulsions are here common, sometimes occurring in rapid succession & ending in coma or at least in, drowsiness & stupor. The pulse is very rapid & weak, and often irregular. The stomach evidently suffers sometimes without vomiting, its powers being so paralyzed as to prevent its action; though its contents consisting of a dark, granulated or flocculent fluid are often ejected by a kind of gulping up, produced by a spasmodic effort of the diaphragm, analagous to singultus. In this modification of the disease the pulmonary organs are sometimes involved, early betrayed by cough, hoarseness, with dejection, pain in the eyes,

and nostrils, these are speedily followed by very embarrassed breathing, with bronchial râle from the immense secretion of viliated mucous, but the character of the throat affection there is some difference from that of the inflammatory disease less tumefaction exists & it is of a darker complexion the surface is much more apt to be covered by a membrane which is usually thick soft & pultaceous and shows aphthous ulceration exist, it very widely and rapidly spreads, discharging an acrid flux which passing out of the mouth and nostrils or both excoriates the part it touches, & the fetor is excessive: concomitantly the voice is hoarser, the respiration greatly oppressed, deglutition more difficult, with increased rigidity of the jaws, & there is a constant though ineffectual effort to disengage & bring up the irritating matter. Thus state of things not being arrested, heavy stupor supervenes, the pulse becomes so diminutive as scarcely to be felt: and finally death takes place from absolute exhaustion, not more abruptly by some cerebral, laryngeal or pulmonary affection, Sometimes, however, the

patient is conducted through all these untoward symptoms, and then with a shattered system, has not unfrequently to struggle with exhausting abscesses ulcers & alvine discharges, which too often carry him off, though he may survive even these; & ultimately be restored to health. — The duration of the disease is from a few hours to eight or ten days, according to the nature of the epidemic, its attack, the character of its complications, & the constitutional impressibility of the patient; many of the more severe cases terminate in death, in one, two, or three days, frequently at the end of the first week, or early part of the second.

Sequelæ. — Few diseases leave a longer train of evils behind them, than Scarlet fever. Among the most common & troublesome are the abscesses which form in the vicinity of the parotid glands & submaxillary, the copious discharges from these sources are more than the exhausted system can bear, & the patient after having survived Scarlet fever, dies of constitutional irritation, sometimes an abscess opens into the external meatus, & gives occasion to long continued and exceedingly obstinate discharges of pus from

the ear, attended with destruction of its bones and ulceration of the membrana tympani. In some cases the eustachian tube is closed by union after ulceration or by inflammatory thickening of its coats, so as to produce permanent deafness, or dulness of hearing. The nostrils are sometimes similarly affected, and the foundation for troublesome ozena is laid. The stomach often participates in the disease and the patient passes from a scarlet fever into a dangerous gastro-enteritis, often attended with obstinate diarrhœa, requiring the most careful treatment. The serous membranes often suffer both inflammation in the progress of the disease or during its decline, and encephalitis, pleuritis & peritonitis may be added to the catalogue of its troubles.

But the most frequent of all is dropsy. It is generally in the form of Anasarca, though sometimes of Ascites, Hydrothorax, Hydropericardium & Hydrocephalus. Heaviness, approaching to stupor with other signs of cerebral disease is not infrequent attendants on the dropsy of Scarlet fever. The affection almost always yields

to treatment, but occasionally a sudden effusion takes place into the cavity of the Chest, or into the ventricles of the brain, causing death in a few hours. Sometimes there is effusion into the ventricles, producing sudden death without any appearance of dropsy in Anatomical Characters. The morbid appearances on the dissection of fatal cases of Scarlatina are by no means uniform. In many cases, of the disease has continued beyond the third day, dissection reveals a congested state of the mouth and pharynx. These organs exhibit a deep red tinge, which, in some instances extends to the trachea and bronchia, there is generally swelling of the tonsils and the adjacent parts, which are frequently covered with coagulable lymph. Various internal organs are congested, and when inflammation of any tissue has supervened the effects of it are seen after death. The mucous tissue of the primæ viæ, particularly of the Stomach and upper intestines, is often highly inflamed, and in some cases the glands of Peyer & Brunner

have been, enlarged & softened, though in a much less degree than in Typhoid fever. Nor is this appearance necessarily associated with the typhoid state of Scarlatina. The lungs are sometimes so much engorged with blood as to have lost in a great degree, their natural appearance & buoyancy. On the brain there is always arborescent vascularity, with turbid effusion between the arachnoid and pia mater, & the ventricles are occasionally filled with serosity. The liver is often engorged and soft in texture and passive congestion is detected in nearly all the organs of the great cavities, & even effusions & extravasations are common events. Dr Armstrong in his work on Scarlet fever says; from a cautious survey of the symptoms during life & from the examination of several bodies after death I am warranted in asserting, that the brain, the liver, the stomach, the intestines and the lungs are the parts most often inflamed and that the inflammation in these parts is

generally the cause of death, together with the affection of the throat. Dissection has, indeed as yet shed no light on the nature of Scarlet fever, or the other exanthemata. It is reasonable to suppose that much of the peculiarity as well as the grades of violence of the disease are owing to the difference of intensity in which its specific contagion operates. It is a poison, from which the system endeavours to extricate itself, and according to its resources, is the result. If they be great we have an open, inflammatory form of the disease, & conversely a low congestive state, if they be feeble and incompetently exercised. Death, which is thought by many to be occassioned in the anginose variety yet by the condition of the throat, does not seem, to me to be justly assigned. This topical affection, can, rarely be productive of such an event, except when it is extended to the larynx. This disease is characterized by great nervous and sensorial disturbance & by an almost unexampled derangement from inflammation,

or congestion or both of nearly all the important organs. The constitutional powers become impaired and utterly prostrated by such lesions. The throat suffers in common, runs into gangrene from the loss of vitality and perishes in the general destruction. Diagnosis. On the first stage before the appearance of the efflorescence. Scarlatina may be readily mistaken for many other febrile diseases. Suspicion however may be aroused if during the prevalence of an Epidemic a patient is seen labouring under an extraordinary frequency of pulse, unusual heat of the surface redness and soreness of the fauces & vomiting, with absence of catarrhal Symptoms. After the eruption one of the complaints with which it may be most easily confounded is measles, from which it may be distinguished in the first place by the absence of catarrhal symptoms, whereas measles commences with coryza, sneezing suffusion & sensitiveness of the eyes, irritative cough slight dyspnœa, & other symptoms of catarrh,

The eruption in measles shows itself on the
fourth day of the fever, but in Scarlatina it may
usually be distinguished on the second. In
measles the rash is disposed in irregular patches
in a crescentic form, & it is slightly elevated so as
to be sensible to the touch. In Scarlatina the
eruption is more punctuated in the beginning
and at last assumes the appearance of broad
patches of an indeterminate shape. The rash
has a different tint in the two diseases, it is
of a vivid red in Scarlatina; but of a darker
raspberry hue in Rubeola. Roseola is
distinguished from Scarlet fever, by the
partial rash regularly diffused. Sometimes
in rings — by the absence of the throat affection,
by the mildness of the febrile disorder, and by
the short duration of the complaint —

Prognosis — There are probably few diseases
in which it is more important that a cautious
prognosis should be given, than in Scarlatina.
In a great majority of cases there is little
danger to life, yet in some instances, it must —

unexpectedly becomes alarming. When apparent the patient had been doing perfectly well, by a sudden sinking of the vital energy. Or by the occurrence of serious complications. Few diseases are more treacherous or require greater vigilance. There seems to be in certain individuals and even in certain families, an extraordinary tendency to the most violent & fatal symptoms, & sometimes a whole family is thus desolated, upon the same or successive occasions, though the disease prevailing at the time may have no special malignity. In such families of course the prognosis is more unfavourable than in others, and much care should be taken, to guard them from exposure to the contagion. The disease is generally pronounced to be particularly dangerous, during pregnancy & the puerperal state. Some suppose, that children withstand its violence better than those of adult age. Among the unfavourable signs is a late appearance, deficiency or sudden retrocession of the eruption, in connection with

other bad Symptoms as persistent delirium or
profound coma, a livid or purple colour of the face,
with petechiæ, ecchymoses, or hemorrhage, a
livid appearance of the fauces, with gangrenous
slough or ulcers, extension of the pseudo
membranous exudation into the larynx, the
occurrence of severe intercurrent inflammation,
of the vital organs, small, frequent pulse
with great prostration of strength, hurried
respiration, not depending upon active
inflammation of the lungs, acrid discharges
from the nose & ears, involuntary evacuations
subsultus tendinum, hiccoughs or gangrene
of those parts subjected to pressure, or in the
extremities. The data for arriving at an infallible
conclusion, respecting the mortality in Scarlatina
are considered uncertain. In some epidemics
the disease is remarkable for its benign character,
when any prudence is observed in treatment,
scarcely affording a single example of a fatal
termination; while in others it destroys all
attacks & threatens to deprive large districts of

of the merry prattle of the little ones. baffling
the best directed efforts to arrest its progress
& fatality in. It is one of those diseases which,
very conspicuously appears to have Cycles, in
which, the most opposite characters are presented.
A little more than a Century ago, it was a
terror to every community in our land. But
about the beginning of the present Century
it assumed a character so mild as to
occasion, but little anxiety in its management.
From, eighteen hundred & thirty to the present
time, it has proved often the reverse, in
some seasons being highly malignant and
alarmingly fatal in. Treatment.
A large majority of the cases of Scarlet fever run
and favourably without medical interference.
Hence the confidence with which some
men of limited experience, boast of their annual
success in the treatment of it. This fact has
given, Ephemeral reputation to Empirics &
Quackery in every community in which it
has prevailed, and has on the same princeple

acquired for Homœopathy, some popular reputation, Little else is required in mild Scarlatina, than, the ordinary antiphlogistic regimen, to regulate the diet, to see that the apartment is well ventilated & of comfortable temperature; to administer cooling drinks and the mildest aperients, watching at the same time the tendency to those unfavourable changes already indicated. Sydenham, who saw the disease in a mild form, says that none should die from it, except occasioned by too great officiousness of the practitioner, If that great physician, had seen, the disease in its severe forms he would perhaps have changed his opinion, yet every man, of extensive observation, has been, called to witness cases in which, the "nimia diligentia medicinæ" has been, more productive of evil than the malady itself, and which, would have been, averted by the "vis medicatrix naturæ". In the treatment of this disease special regard must be had to its decidedly inflammatory

or congestive character, and the practise must be correspondingly energetic, and in order to succeed must be accommodated to these respective conditions, 1st The practice adapted to its inflammatory form, "A gentle emetic at the onset of the disease may be administered in every case with perfect safety" As it is impossible to foresee, what the character of the disease may be and as it is believed by most experienced practitioners to be exceeding influential in mitigating the future career of the case, it should always be employed, It may consist of Ipecacuanha or of a combination of it with tarter emetic.

If there should be any difference of opinion as to the general use of emetics, surely there can be none concerning their applicability to the anginose form of the disease and more especially when complicated with the affections of the bronchia and lungs. The most ample experience has demonstrated their special adaptation to such cases.

moreover it will often be proper to repeat them occasionally, as the foul state of the fauces may require. Afterwards the bowels should be kept open by Cathartics, which should be accommodated to the circumstances of the case. Those of a depleting nature, as Epsom salts and Rochelle's being indicated where there is much excitement, with considerable energy of the system. The Lenitive powder where there is nausea or vomiting. Magnesia when there is evident acidity of the primæ viæ, Castor oil, when there is abdominal pain, and rhubarb when the system is too feeble to admit of watery purgation. The above & other aperients may be variously combined, to meet the indications in different cases. Advantage will often accrue from Castor oil, combined with Laudanum; in the incidental diarrhœa, as the bowels are thus cleansed of the offensive secretions which accumulate, while they are rendered less sensible of the irritant impression,

Great care must however be observed not to pro-
to exhaustion, Febrile excitement, however be-
highly developed, and the more so when accompa-
by any local inflammation, the loss of blood ca-
no longer be postponed, and must be proportiona-
to the degree of emergency. Yet it must be
confessed that great contrariety of opinion
prevails among the practitioners as to the
propriety of venesection. This difference of
sentiment in relation to the remedy, I presume
must be referred to its having been applie-
under opposite circumstances of the disease
and of course attended with very different
results. Dr Handy, a venerable physician
of Princess Ann, Somerset County uses the
following language. "Directed with discrimina-
Bloodletting cannot fail according to my experien-
to be beneficial & often indeed indispensable:
convinced of this, my own practise has been
to employ moderate venesection at the outset,
repeated if necessary, and I must affirm, that
of all the remedies, it has produced in my

hands, the most gratifying results, What else can we interpose in those violently inflammatory attacks, in which the burning skin, swelled throat, racked brain and universal distress, together with perhaps convulsions, call aloud for the relief, at the hands of the practitioner, Wherefore repeat that my practice has been to employ venesection, in the onset of the disease, when there is violent fever and heat and more particularly severe angina, or high cerebral irritation, or inflammatory congestion, of important internal organs, We have certainly seen bleeding more useful in relieving the distressing sore throat, than all the local means as gargles, caustics &c which are recommended in the books, & it is the only means that I have seen useful in relieving those cases in which the brain gives way at the outset of the disease, there should immediate venesection be resorted to; even the the first hours of the attack, for if neglected or delayed beyond the first paroxysm of the fever, it is common with

other remedies seems to do no good, but probably rather hastens the termination. „Once for all while I would not lay down any prescriptive rule, with respect to bleeding in Scarlet fever I would warn against taking blood, with the same freedom, as in the more purely phlegmasiæ affections, or perhaps to the amount that the existing indication, in the case it calls for, would seem to demand it. Collapse may ensue from an abuse of the practice, and it is generally hazardous in the advanced stage of the fever, yet cases are occasionally observed which seem to be snatched from the grave by copious bleeding from the nose, and at times too when it was thought that the loss of an ounce or two of blood would prove fatal. Whenever the lancet is employed it is a good rule to place the patient in a sitting posture, as the failure of the pulse in this position will sooner give warning to arrest the flow of blood. Local affections may be treated by leeches or cups". We would here remark, that in the treatment of all

diseases, the mind of the physician should
be untrammeled by the dogmas of any school and
unbiassed by the dicta of any Author, however
renowned however he may be, when, summoned
to a case of Scarlatina and the question of
venesection arises, he should bear in mind
the principles involved, and remember that it
is depletory and debilitating; that the poison
of contagious fevers is not by it eliminated,
nor the progress of the malady thereby stayed.
That blood letting in anticipation of inflammations
which are incidental, are seldom justifiable
and the vital forces need to be sustained in
the depression, inseperable from the attack, and
the regimen adopted. As the result of some
experience and much reflection, I should be disposed
to keep ever clearly before my mind the once
established fact; That whereas venesection is
most efficient & satisfactory in inflammations
of the serous and parenchymatous tissues, it
becomes far less effectual, than, the topical
methods of abstraction, when, the same condition,

exists in the mucous & cutaneous tissues,
With this view I should be much inclined
to rely for general depletion upon purgatives
(which Jalap is my favourite in these cases)
and trust to the congestion, inflammation
and engorgement of the throat and parts contiguous
to the application of leeches — Nevertheless
I would not be deprived of my lancet, but
with a judgment free to decide, would
when required, use it with discrimination,
prudence and caution; In all cases
in which the skin is universally hot & dry
and the patient experiences no sensation of
chilliness, the external application of cold
water, is highly useful, the best and safest
mode of applying it is by sponging, the surface
which not only abates the heat, but diminishes
the frequency of the pulse, allays the thirst,
acts as a sedative; often induces sleep, and
sometimes gentle perspiration, But to derive
its full efficacy, the Sponges must be freely
constantly applied to the surface of the body

extremities, and be discontinued only when
a degree of coldness is occasioned that might
be followed by chilliness & collapse or
retrocession of the rash, Ordinarily cerebral
affections, whether delirium, coma or
convulsions are greatly benefited by it.
In these cases even ice to the head is often
proper, tepid water may be used in preference
to the cold if the circumstances of the case
seem to demand it, When the fever is well
developed a course of internal refrigerants
should be prescribed, The patient may be
allowed to take frequent draughts of cold
water in moderate quantity and to hold ice
in his mouth, or to swallow crushed ice,
Small doses may be given, every hour or two
of neutral mixture, citrate of potassa, acetate
or carbonate of potassa, solution of the muriate
of ammonia, citrate of ammonia or hydrochlorate
of ammonia, to which, when the stomach is
irritable and the general condition of the
system not asthenic, Ipecac or minute

doses of tartar emetic from one thirtieth, to one tenth, of a grain, may be added, when the Stomach, is irritable the effervescing draught should be preferred. bicarb of Soda or potassa, with or without tartar emetic is often of great value, producing an effect far beyond neutralizing the acid found in the Stomach, — Nervous symptoms may be counteracted by the addition, to the diaphoretic just mentioned of sweet spirits of nitre — Hoffmans anodyne, or Camphor water — In the progress of the disease, chlorate of potassa is a valuable means, in the proportion of half a drachm, to a pint of water and drank through, the day, or it may be combined in mixture with bicarb of Soda, a few grains of a dose — But the practitioner should always be on the watch, for symptoms of debility and be prepared to counteract them, in some instances they attend the case from the commencement. in others, coming on during its course; Whenever they ~~are~~ seen no hesitation

should exist to resort to tonics and stimulants.
Sulphate of Quinine dissolved in one of the
dilute mineral acids, or the compound infusion
of Peruvian bark, is well adapted to many of
these cases; When the debility is considerable
it is necessary to use substances which are
more stimulating, as wine whey, wine, brandy
(carbonate of ammonia), Capsicum, oil of
turpentine &c, when nervous symptoms are
superadded to debility, Musk, Assafatida
Camphor, or Valerian, may be employed. Animal
broths, or extracts, should also be given, especially
in the advanced stages, and when the blood
is depraved. In the passively congested
variety of Scarlatina, which now claims
attention, the attack, as formerly mentioned
may be introduced by a very protracted collapse.
The leading object here, is to arouse the
recuperative energies of the system, and to
bring on reaction, Some of the means
of effecting which, have been detailed in
treating of the stage of exhaustion or debility

The warm or hot vapour bath, succeeded by friction, of Capsicum or other stimulant or Sinapisms, or blisters to the extremities and above all, over the epigastrium, with hot cordial beverages, or some of the more active diaphoretics. Having obtained the object in view, namely, perfect reaction, then, an emetic would be serviceable - afterwards, moderate purging, at first a dose of calomel & afterwards Rhubarb or other simple means. It is not easy here to decide upon the expediency of venesection. The abstraction of blood appears to be required by the loaded state of the organs and contra-indicated by the depression of the vital energies. My own judgment is, that it should not be hazarded unless reaction is pretty fully established, the circulation of considerable force and the skin hot, and even then it should be resorted to with extreme circumspection; in doubtful circumstances topical bleeding by leeches,

cups is decidedly preferable. The case becoming unequivocally Typhoid we must resort to mild alterative aperients, as Hydrargyrum cum creta with Rhubarb, to throw off the morbid secretions and prevent their accumulation. And here great caution must be used in the repeated employment of mercurials, as they always prove injurious and sometimes destructive if pushed so far, as to produce their specific impression. Whatever may have been the precise character of the disease in the early stages, when, exhaustion supervenes, there is considerable uniformity as to the plan to be pursued. Our resort is to the means by which the resources of life are renovated or strengthened and by which Carbonate of ammonia, Camphor, Lime whey, and wine itself or even diluted brandy and small doses of opium, if not especially contra indicated, are usually confessed to be most efficacious. At this time Sulphate of Quinia alone, or with an opiate and the sweet spirits of nitre, as may be indicated assisted by

some cordial drinks are invaluable means.
While thus conducting the general treatment
the affection of the throat, should it exist,
must not be neglected. the best application is
that of hogs lard externally, and a warm cataplasm
besides General Bloodletting. topical bleeding
by means of leeches is highly serviceable, blisters
are also highly recommended. A high
Authority already quoted says. "I know of no
local remedy that gives more relief, than Lard
frequently applied over the surface of the body
in those cases attended with intolerable itching
and burning, producing excessive restlessness."
We have recently noticed in the Daily Sun
paper a paragraph strongly commending
friction of the surface with fat bacon; which
we have no doubt is useful in allaying, in
some degree, the unpleasant sense of itching
and burning generally attend and in some
degree upon the eruption. - As internal
applications to the throat it is recommended
to employ flaxseed or slippery elm, water acidulated

with muriatic or sulphuric acid, or vinegar, weak
solution of alum, Chlorate of potassa, nitrate of potassa
common salt or brandy and water, In the progress of
the disease, when pseudo membranous, gangrenous or
aphthous patches are observed in the fauces, and the
colour of the mucous membrane is dark, red, the
infusion of Capsicum, or the pepper vinegar is a
very valuable application, or the powder of burnt
alum, or muriatic acid mixed with honey or lemon
juice in solution, The sloughs being detached
leaving an unhealthy surface, the sulphate of
copper or the nitrate of silver, or sulphate of Zinc in
solution are valuable agents, These remedies
are to be applied by means of a mop or camels hair
pencil, and the offensive odour which proceeds from
the throat in some of these cases, may be corrected by
gargles or washes of solution of creasote, chloride of
lime or chloride of Soda or by diluted pyroligneous
acid which also acts favorably upon the diseased
surface - In cases advanced or asthenic in
character, blistered surfaces are liable to become
gangrenous & slough, therefore they should be, if

possible, avoided. In all great care should be observed in applying blisters, in any stage of Scarlatina and if applied, ought to be removed so soon as the redden, the surface & to be followed at once by an emolient poultice, which will complete the vesicatory process, with the least possible irritation and they should be subsequently dressed with resin, Cerate, and covered with the light bread yeast or Carrot poultice, Perhaps it is for safety to apply rubefacients to the throat, such as the liniment of ammonia, tincture of capsicum or oil of turpentine diluted with olive oil. The diet in the decidedly inflammatory stage must consist of cold farinaceous, or mucilaginous beverages exclusively, with ice or iced water. Let also the freest ventilation be kept up in hot weather and the patient very slightly covered. But under other circumstances of the disease the practice is reversed, when the eruption refuses to show itself clearly or manifests a disposition to recede. the skin also may be very cool, the pulse feeble and other evidences

existing typhoid prostration, a higher degree of
temperature must be secured, the diet be made
more nutritious and the drinks warm, & perhaps
cordial & moderately exciting. During convalescence
the susceptibility to disease is retained, readily
excited by the slightest cause, serious consequences
often ensue, from exposure to cold and by improper
indulgence in eating & other indiscretions, But
independently of such impendence, though
occasionally to be traced to it, are certain sequelæ
or effects, to which attention is often directed.
Cases have been met with of enlargement of the
lymphatic and parotid glands, of the testes, suppuration
of the ears, various pectoral or gastric, or enteric affections
hydropic effusion, or great derangement of the
nervous system, as well as chronic cutaneous
eruptions, and the development of Scrofula & c
The most ordinary however of these consequent
affections, is a hot, dry, harsh, unperspirable
state of the skin, and especially when desquammation
has not taken place & the functions of the surface
so essential to the order of health, are not performed

fever is kept up, or revived with a most harass
degree of itching, preventive of composure or sle
and chiefly occasioning as some suppose mos
of those affections, already enumerated, and
particularly by aqueous effusion. As the cau
of so much mischief, this condition of the cutaneo
tissue should always be removed without dela
and the most effectual means of doing it is, by
bathing, taking especial care to avoid any expos
to cold, yet it may be necessary when excitement
is considerable, to bleed and purge moderately
and next resort to mild diaphoretics. But fro
bad management or otherwise, dropsy is so very
frequent an occurrence, that it presents her
an especial claim to consideration. In mos
instances it first appears as Oedema of the
face and neck, or of the lower extremities, though
numerous cases occur of effusion, also of
effusion into the cavities. Great differenc
of opinion prevails as to the proper managme
of this dropsy, perhaps the cause is, that
it is connected with such opposite states of

the system, that no one plan can be adapted
to all cases. It is usually attended with, an
accelerated hard and febrile pulse, dry skin,
deficient urinary secretion; the little that passes
away, deposits a pink colored sediment, and
if it contain albumen. No hesitation should
exist as to the propriety of bleeding, the saline
purgatives, the mild diuretics, acetate, or tartrate
or nitrate of potassa or the cream tartar especially
should be prescribed, with a very low diet
Effusion may take place under circumstances
directly the reverse of the preceding, in a
weak, highly cachectic condition of the System,
there moderate purging and the more stimulating
diuretics are the remedies in which confidence
is usually placed, as Squills, Sweet Spirits of
nitre Solution of acetate of ammonia) infusion
of Juniper berries, Bitartrate of potassa
made into a confection with Syrup and a
few grains of powdered ginger is an useful
remedy but above all in this condition an
infusion of Digitalis is particularly efficacious

and in many instances so much so as to supersede all other means, To the general employment of tonics in this affection, on the supposition that the dropsy depends upon debility the best practical observers in the profession strongly object, When the effusion is removed and all further danger of inflammation is removed, small doses of Tincture or iron, or other mild tonics, may be given three times a day. These remedies with a nutritious diet attention to the bowels, and invigorating air prove the best means of removing all the consequences of Scarlatina and of establishing the general health. Preventive Treatment The best preventive treatment is doubtless to keep children as little exposed as possible to the source of infection, as their liability to attack, lessens, (after the early years of infancy) with the advance of age, Free ventilation of the sick chamber should be observed in order to dilute & dissipate the poison and cleanliness must not be neglected,

Much has been written and spoken,
respecting the alleged preventive power
of Belladonna in Scarlet fever in
America as well as in Europe, but
more especially in Germany where the
notion originated, Its use for this purpose
was introduced by Hahneman the
originator of homœopathy, on the ground
that its use produces effects analagous
to those of Scarlatina, The hypothesis
"similia similibus curantur" which in
this connection signifies that diseases are
cured by remedies, capable of producing
in a healthy body similar maladies, is
a fallacy, which runs through the whole
homœopathic theory, Similarity of symptoms
not similarity of diseases, lies at the base of
all their therapeutic proceedings, and if
they had not taken refuge in a Latin
lexicon, which has simply served the
purpose of mystification, the so called
scientific theory of Hahneman would long since

have been seen to deserve that character as little as did the old doctrine of signatures. The results obtained by the use of Belladonna as a prophylactic are singularly conflicting. Some contend that it acts as a preventive when given in large doses, others practitioners of most extensive observation deny that it acts at all as a preventive, and it must not be forgotten, that the general result of the more recent experiments with the drug, was so much less favorable than those which were at first obtained that Hahneman was compelled to admit its frequent failure and to resort to the supposition of a change in the fever, in order to explain the fact. For those cases in which Belladonna was not likely to be serviceable, Hahneman suggested the use of Aconite, and now his disciples recommend the use of Belladonna, and Aconite

Alternately, three grains of the extract of Belladonna are ordered to be dissolved in an ounce of distilled water, and three drops of the solution given, twice a day to a child under one year of age, to be increased one drop for each additional year. Sulphuret of Antimony and Calomel have also been employed as prophylactics in the dose of one sixteenth and one eighteenth of a grain, each combined, for a child of four, two or four years old, repeated several times a day. Bichloride has likewise been recommended to be taken in the quantity of a few grains every morning, so as to produce one laxative motion in the day. It would be exceedingly difficult to establish, with absolute certainty the value of any agent as a prophylactic in Scarlatina

Every practitioner and almost every student of medicine has seen a single member of a family affected with the disease, while the remainder exposed during the whole time, escaped without the aid of any preventive measures whatsoever. Of the above, or any other means act as prophylactics in Scarlatina it appears to me that their action can only be explained on the principle that two distinctly morbid impressions do not very readily coexist at the same time, but that one is prone to suspend or counteract the other.

An Inaugural Dissertation

on Ulcers

submitted to the examination

of the

Provost, Regents and Faculty

of Physic

of the

University of Maryland

for the

Degree of Doctor of Medicine

by

Charles Allen Bozeman

of Indiana

Baltimore, February 1852

[illegible] [illegible]. [illegible] [illegible] [illegible] the

[illegible] [illegible] [illegible] [illegible] [illegible]

practical importance to study well the [illegible]

[illegible] of the [illegible] [illegible] of the [illegible]

[illegible] so often distresses and harass the human

system - [illegible] [illegible] [illegible] [illegible]

in with the most [illegible] pain in the [illegible]

and vomiting, the [illegible] [illegible] [illegible]

[illegible] [illegible] [illegible] [illegible] [illegible]

[illegible] the disease terminating fatally. -

The appearance of the [illegible] [illegible] [illegible]

from that of a healthy condition. The patient

complains in the beginning of the disease of pain

and tenderness in no particular place - sometimes

in the neighbourhood of the [illegible] [illegible]

in the [illegible] and [illegible] [illegible]

[illegible] [illegible] [illegible] [illegible] [illegible]

Organic changes, which has been observed after

death in a person, who has died both of

[illegible] mechanical obstruction of the contents of [illegible] are in some cases bands or strings of [illegible]

[illegible]

[illegible] is the upper part of the tube falls down in the [illegible] fills it up and inflamation sets in there [illegible] chronic thickening of the coats of the intes=tines, which has narrowed its channel or [illegible] or some foreign substance fills it up within. Sometimes a small Hernia hardly [illegible] from [illegible]

[illegible]

[illegible] dark colour when the gut is mechan=

...nally obstructed - the part which lies on the [illegible] obstruction, is inflamed - when on the other side of the obstruction, the intestine pre[illegible] [illegible] healthy appearance - As before said the part [illegible] [illegible] [illegible] with [illegible] other hand, the side below the obstruction [illegible] contracted cord -

As before said there is a variety in the mor[illegible] [illegible] ...ly included under the term of Ileus [illegible] [illegible] inflammation and gangrene - Obstruction

[illegible]

[illegible]

great diversity in the primary state of the affection
for that in some it consists in simple loss
of ... power, though it may pass into inflam-
mation at an advanced period; while in others
[illegible]
ment in ... [illegible]
When in these we find gangrene commencing
in mucous appearance we may conclude that
it is the muscular coat, which receives the prin-
cipal ... of inflammation [illegible]
[illegible]
[illegible] distended or contracted; opinions
differ. Dr. Abercrombie as cited in Dr. Bell's
lectures upon these, thinks it most probable
that [illegible]
[illegible]
[illegible] spasms [illegible]

[illegible] vel is empty its muscular power being
impaired" while repeating the language of
[illegible]
[illegible]
[illegible] definition after death of a mere contraction
[illegible]
[illegible]
[illegible]
[illegible]
the invagination is sometimes seen in [illegible]
[illegible] Formerly a great importance
was attached to these invaginations more [illegible]
[illegible]
the intestine is often unconnected with in-
flammation, that it may be accidental and not
necessarily a fatal consequence of preexisting disease
to draw the conclusion [illegible]
[illegible]
[illegible] after death [illegible]

to Enteritis and Colic. It is stated by several authorities in [illegible] than [illegible] more liable to the disease than strong [illegible] to have [illegible] ing upon mechanical obstruction is Cholera Infantum mentioned. It is also said to [illegible] of Gout.

Occasional causes of Intussusception are mentioned worms - inflammatory action [illegible] of [illegible] [illegible] from dysentery by Dr Copland [illegible]

On the other hand, if the [illegible] [illegible]
[illegible]
the cavity of the [illegible] the [illegible]
tube. The descending contents, it is true, and
reaching the invaginated portion [illegible]
[illegible]
[illegible] through an opening [illegible]
the base of the [illegible]
jecting through [illegible]
position, than they could have found entrance
into it. [illegible]
[illegible]
[illegible]
[illegible] implicated [illegible]
the canals at the invaginated section became
merged into one; which gradually dilates more
and [illegible] after [illegible] the
passage of the intestinal contents: —

[illegible]

[illegible]

[illegible] cured. The internal part of the invagina-
tion, or the protruded section of the intestine
[illegible] which the contents of the upper portion of
the digestive tube are continually pressing, be-
[illegible]
[illegible]
[illegible]
[illegible] of the entire fold. The internal
[illegible]
[illegible]
[illegible] and expelled with fecal matters.
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

Diagnosis. It has been contrary opinions [illegible]

[illegible]

...tives, which will enable the observing [practi]tioner to infer the existence of imagina[-]

[illegible]

...tive Vermina and Animus and other

[illegible]

[illegible] or other external irritants. [illegible]

[illegible]

purgatives. the question will often be prac-

tically asked by the practitioner now

[illegible] shall I continue to administer pur-

[illegible]

[illegible]

[illegible] is to administer mild, chalar-

[illegible]

[illegible] will perhaps administer some more purga-

[illegible] purges and in this manner continue

[illegible]

[illegible]

[illegible] therefore continue the purgation treat-

ment [illegible] the answer will be - not farther

[illegible]

[illegible]

[illegible] can be assured of that some mecha-

[illegible] obstacles exist, which will not be

[illegible] by [illegible]

[illegible] the intestine is not displaced, re=

[illegible]

[illegible] generally active purging is not required.

[illegible]

[illegible] Calomel

[illegible] 10 to 20 grains in the form of a pill,

[illegible] if the pain be violent a grain of Opi=

[illegible] 10 grains of Camphor [illegible]

[illegible]

[illegible] morbid muscular action of the intestine

[illegible]

[illegible] old practise was it recommended to

[illegible]

[illegible] and administer it in small doses

[illegible] the patient feels that the medicine

has traversed his bowels and there is a

[illegible]

[illegible] to go to stools, free evacuations may

[illegible]ed at this junction turpentine ene-
[illegible] with castor oil even taken by the
[illegible]. The oil of turpentine has been thought
[illegible] good succedaneum to the Calomel and
[illegible]
[illegible]
[illegible] the commencement of the [illegible]
[illegible] symptoms. This remedy is still more
[illegible] in the advanced or sinking
stage of the disease in which there is [illegible]
[illegible] and feculent vomiting. In some
cases, after the most active and approved
[illegible] Calomel and aloes – or Calomel
[illegible]
[illegible] that the [illegible]
[illegible] has had this effect entirely. Even
[illegible] sulphas, when [illegible]
[illegible]
[illegible] admirable effects. Croton oil in-

without their use. Dr. Heberden says; "the
[illegible]
[illegible]"
[illegible]
judgement [illegible]
[illegible]
than would have stayed without its help.
[illegible]
[illegible]
[illegible] in which the divine person is [illegible]
[illegible]
[illegible]
[illegible] sooner may be allowed to die more easily."
It has been said before that these cases are
out of our reach: but yet remains for us to
[illegible]
[illegible] our last recourse but [illegible] doubtful
[illegible] consist in [illegible]
portion of the [illegible] by [illegible]

[illegible]sion through the parietes of the abdo-
[illegible]
[illegible]
[illegible]
[illegible]
[illegible] with fatal results. Such is [illegible]
[illegible]
[illegible]
[illegible] also a case in which, after an exh[illegible]
[illegible]
[illegible] we performed the operation
[illegible] the place [illegible] which the patient [illegible]
[illegible]
[illegible]
[illegible] in the [illegible]
[illegible] was removed and the patient per-
[illegible] recovered. On the other hand
[illegible] recollect that [illegible]
[illegible]

A

Clinical Report

of

Six cases of Disease

Submitted to the Examination

of

The Provost, Regents

and

Faculty of Physic

of

The University of Maryland

for the Degree

of

Doctor of Medicine

by

William Queensbury Taylor

of

Anne Arundel County

Maryland

To the Professors and Faculty
of the
University of Maryland –

In obedience to the requisitions of the 4th article of the "Statutes of the Faculty of Physic", I present to you through your Dean a clinical report of six cases of disease, drawn up so far as was practicable from my own observation – I say so far as was practicable, because I have but been accustomed during my study of Medicine to observe diseases, not having had an opportunity and consequently had to obtain a knowledge of some of the existing signs through the kind senses of others. This report was also made out from patients at the Infirmary while my attention has been especially called to the arduous duties of the present session. For these reasons it must necessarily be imperfect and I must therefore beg your indulgence for inaccuracies of observation.

Case of Acute Rheumatism.

The patient, an Irishman, aged 27 years, a man of full plethoric habit, was admitted to the Baltimore Infirmary for medical treatment on [illegible] 1851. He states that he has been in this country 2 months, and his occupation is that of a laborer. He stated also that his mother's people were troubled with rheumatism, but he has enjoyed health up to the present attack. He was considerably exposed on the emigrant ship, having no bed to sleep upon. About three weeks since he was taken with a rigor, headache, nausea and vomiting. A few days after he was taken with violent pains with a tendency to travel, commencing in the back, then the knees, and gradually extended to all the joints of the lower extremities. When he entered the Infirmary, his condition was as follows. Pulse at 90 in the minute, full and strong, tongue coated with a light-coloured fur. His elbows, knees and wrists swollen and red; [illegible] very much

swollen without discoloration, soft and fluc=
=tuating, showing that it is an attack of the fi=
=brous variety; has perspired freely every few
minutes freely; urine high colored, and deposites
on standing a lateritious sediment; [illegible] or=
=dered free venesection and "Chambers' treatment"
He was bled to 30 ℥

Nov 8th. Pulse 130; complains of much pain
in the lumbar region, 6 or 8 cups were directed
to be put upon his spine, and had a second time.
Vinum colchici gtts XV to be continued with mag=
=nesia ℥ii till bowels are freely moved, Calomel
and Opium at night and black draught in the
morning — flannel was also directed to be put
upon his wrists and ankles.

Nov. 9th Pulse 120 irregular and somewhat incom=
=pressible; tongue coated and furred; skin moist
and hot; face flushed; complains of much pain
in his extremities [illegible] =
=dence in physical signs of cardiac disease; slept
well last night. His condition is improving

Treatment directed to be continued and bled a=
=gain; and if he is not much relieved after his
bowels are moved cups to the spine or over the
seat of his greatest pain,

Nov 10th Pulse 115, soft and full, His bowels were
moved three times on yesterday, and once this morn=
=ing before 8 o'clock, Pain has left his upper ex=
=tremities altogether but not the swelling and [illegible]
[illegible] at the wrists, He states that he would feel
perfectly well if not for the pain in his knees,
His limbs were rubbed well last night with much
comfort to the patient, Treatment continued -

Nov 11th Pulse 120, soft and compressible; Tongue
moist and coated, appears to be cleaning from
the edges, Patient complains of an exacerbation of
pain at night, Directed to be again bled and
treatment continued -

Nov 12th Pulse 104 and exceedingly irregular - some
little irregularity in the heart's action, swelling
decreased and very little [illegible] about it. Tongue
cleaning from the tip and edges.

Nov. 13th Pulse 106, soft and somewhat irregular. Pain and swelling have continued to decrease, and tongue continues to clean. Calomel was directed to be stopped as the gums were touched—

Nov. 14th Pulse 96, quick and sharp; feels much better; complains still of exacerbations of pain at night. The swelling at the knees pits on pressure, but at the wrists little.

Nov. 15th Pulse 96; two thirds of the tongue cleaned from before backwards; swellings at the knees and wrists much reduced.

Nov. 16th Pulse 91; tongue clean; general condition improving. Ordered [illegible] [illegible] gtt. [illegible] to each dose of Colchicum iii [illegible] [illegible].

Nov. 17th Pulse 90; general condition improving. Ordered Pil. Hydrarg. gr. viii. Pulv. Doveri gr. x at night, black draught in the morning, and continue Colchicum.

Nov. 20th Pulse 92. Swellings almost entirely disappeared; [illegible] [illegible] [illegible] [illegible]. Ordered Vinum Colchici gtt. x [illegible] [illegible] and continue [illegible].

with calcined Magnesia at bed time, also one dose of Doveri Pulv in the morning if bowels are not moved,

Nov 21st Dressed and walking about the room, but still complains of exacerbations of pain at night, ordered to continue Chloricum and Doveri Pulv, Under this treatment he continued to improve, till the 28th when he left the house cured.—

Case of Measles-

The patient an Irish girl, aged 16 years came to this country in August last, face much marked by small pox- She was admitted to the Infirmary Oct 23d to be treated for Rheumatism and slight bon=chitis, of which she recovered, On Sunday Nov 23 one month after her entrance, she was taken with shiv=erings and lassitude, which was followed by fever, slight coryza, sneezing, dry cough, anorexia and thirst, These symptoms continued until the 25th inst (the day upon which I first saw her) when, lead-like pimples miliary eruption, vesicles containing a white milky fluid appeared upon the face and breast, She complained the whole of the day of pains in every part of her and loss of appetite-

Nov 26th Pulse 100, Prof Chew saw her this day at 11 Oclock and diagnosed her disease as measles Bow=els have not moved since the day before yesterday. Ordered Magnesia ℥ ss at 2 Oclock if bowels are not moved before; also a solution composed of Ni=trate of Potash ℥ i, water ℥ ii administered in doses

of ℥ss every 2 hours, with antiphlogistic reg: —

Nov 27th Pimples thicker than on yesterday and be-
-ginning to appear on the arms; face very red;
tongue tipped with red; some cough; bowels still
constipated, Ordered an injection of flax-seed tea at
7 O'clock in the afternoon if bowels are not moved
before —

Nov 29th Pulse 80 tongue red; face [illegible] and erup-
-tions disappearing from the breasts —

Nov 30th Pulse 80; tongue slightly reddened; all the
eruption disappeared except a little from the breast
still complains of pains in her back knees and
head, a part of which may be attributed to the in-
-creasing disposition to rheumatism —

Dec 1st Had slight pains in her knees last night
immediately after getting in bed. She may be con-
-sidered as having recovered from the attack of
Measles.        This case is interesting in several
points, First, the fact of it occurring in a patient
at the Infirmary where there had been no case
of this disease, and in no way exposed to its [illegible]

So far as it was known, the inflammation of the air passages was absent a very important and common symptom in the disease, neither had she any vomiting. Not having seen the case before the occurrence of the eruption I could not discover whether the fever existed at that time. This case is also interesting as this patient was treated in the Infirmary in August for operation and went out cured. On the 23 of October she came in to the Matron ward for acute inflammation and being cured was about to go out for the second time when she was taken with measles and after being cured, she was successfully operated upon by Prof. Smith for strabismus.

# Case of Typhoid Fever or Enteritis

The patient a native of Germany aged 17 years admitted to the Infirmary Friday last and has been in this country three years. She states that she does house work and has lived for the last year in Hanover street near Hanover Market. She states that there was a person sick in the family in which she lived for two weeks, she complained of great weakness and drowsiness. About nine days ago she began to feel badly complaining of headache anorexia pain and soreness in the back and limbs with occasional chills. This condition of things lasted until last Wednesday, when she had a decided rigor followed by high fever, which has continued up to the present time. Her health previous to this attack has been good. Since the attack her bowels have not been loose, having been moved but once since taking a dose of oil. Has had cough since the beginning of her sickness, and has constantly complained of great weakness and drowsiness. For the last five

nights she has had delirium - there has been no
epistaxis - When admitted her condition was as fol-
=lows; pulse 100, respiration 40 in the minute her
bowels have not been moved for the last two days.
Has cough and bronchitis with sonorous and
sibilant rales, over both lungs - Tongue dry and
brownish - lips dry and cracked - sordes about
the teeth - cheeks of a dusky red color - face dull
and inexpressive - mind torpid and complaining of
headache and ringing in the ears abdomen tym-
panitic -
Her condition much the same as on admis-
=sion, pulse 76 condition of the tongue & the teeth
same, of a less brown color and more moist, her
bowels were moved twice last night and once this
morning. headache expression of face and other symp-
=toms remain the same. Prof Chew ordered

℞ Blue Mass grs XVI
Ipecac grs XI
Chalk ℈ ij

divided into 8 powders, one ter die.

Cit Potash gr 5 the hour between; mush and mustard poultice to the abdomen and at night apply ammoniacal liniment to the chest the friction being [illegible]—

Nov 16th Pulse 108, face flushed abdomen tympanitic and gurgling, dullness and vacancy of expression: headache; tongue dry and brown; cough; anorexia; deafness; tongue protruded with difficulty, slight subsultus tendinum rhonchus and sibilus bowels moved once last night; ordered to continue treatment—

Nov 17th Pulse 102 and regular; slept much disturbed during the night; tongue moist and cleaning and less florid and not so much anxious much less stupor—

Nov 18th Pulse 92 and regular considerable stupor; listlessness; bowels less frequently moved tongue dry brown and fissured—

Nov 20th Pulse 120 bowels have [illegible] moved now often through the night [illegible] little brown [illegible] moist [illegible] [illegible] [illegible] surface; delirious during the night [illegible]

Tympanitic: treatment continued—

Nov 21st— Deaf; weak; torpid in mind, complexion better; no pain in the head, no ringing in the ears; delirium during the night and disturbance for which she was ordered [illegible] at the bed time if there be no rise of fever—

Nov 22d Pulse 102; tongue moist and brown; frequent diarrhoea, rested well last night—

Nov 23d Pulse 104 and fine; suffers much from cough; tongue moist; tympanites very much decreased; slept very well last night; suffers nothing from diarrhoea, skin cool and clearing; mustard poultice ordered to be put on thorax; [illegible] to be administered freely for the cough—

Nov 24th Apparently improving, nervous condition better, complexion better; abdominal symptoms better ~~complexion better~~; The burden of the disease seems to be in the thorax, she having been troubled from the beginning with bronchitis from which [illegible] she still apprehends danger. Pulse [illegible] tongue clean and moist— In addition to the other treatment a mus-

=tard plaster was ordered to be put over her right lung (the principal seat of the disease) until redness appears. Gum water was directed to be administered freely, and to it add 5 gtts wine of Ipecac every hour.

Nov 25th Pulse 84: Alterative powders were ordered to be stopped.

Nov 27th Pulse 96: skin feels natural; tongue natural complains of no pain; ordered an injection of flax seed if bowels require it.

Nov 28th Every night till last night has taken an opiate as a narcotic which had its due effect: slept well last night without the opiate. Prof Chew thinks also the opiate has restrained the diarrhoea.

Nov 30th Pulse 96: tongue clean; countenance brighter, appetite good;

Dec 2d Pulse 76 and full condition improving. From this time she continued to improve to perfect health.

The characteristic rose spots did not appear in this case, or was there any epistaxis.

# Case of Bilious Pneumonia —

The patient a sailor in the Elizabeth hay for the last three years aged 28 years a native of Queen Anne County Md — He states that last fall a year ago he had a very severe attack of what his physician called Bilious Pleurisy but that previous to that time his health was good. He also states that last march he had a similar attack to the present — He has been accustomed to sleep in a cold berth and for two nights previous to his attack he slept on board another vessel going to bed when the room was very warm and upon waking in the morning he was very chilly, the fire having gone out during the night — His attack commenced on Dec 26th with a severe chill followed by a high fever, which has continued ever since; with loss of appetite a little [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

epistaxis several times since his attack but not since [illegible] [illegible] — Bowels very loose since his attack, having had four or five evacuations in 24 hours. He entered the Medical [illegible] on December 31st when his condition was as follows; Pulse [illegible] full and hard, respiration 36 in the minute; tongue coated white countenance yellow and dusky; a bright red flush on each cheek. Some headache, complete loss of appetite; bowels very loose; respiration difficult accompanied with contraction and dilatation of alae nasi — complained of dull pain in the left side. There is dullness over the lower and [illegible] portion of left lung — dullness in the left [illegible] re=gion, the lower lobe of the right lung is also affected and extending to the liver, increased vocal [illegible] — bronchial respiration with difficult expectoration. fine crepitation with some tubal respiration, bronchophony and greatly increased vocal resonance — Prof. [illegible] ordered the [illegible] [illegible] [illegible] [illegible] to [illegible] and the following [illegible]

℞ Hydrarg Chloridum Mite grs xviii
Pulv Ipecac grs ix
Cit. Potash ℈ ij

divided into 9 powders, one to be taken every two hours.

℞ Antimonii et Potassae Tartras grs iv
Vinum Antimonii ℥ f i

5 gtts every hour between

Dec. 31st Feels better; slept well in the early part of last night, restless and delirious the remainder; Bowels still loose having been moved several times during the night and this morning; auscultation and percussion present the same signs as on yesterday except there is more tubal blowing and less fine crepitation. Pulse 108: respiration 24: in other respects condition the same as on yesterday. Previous treatment directed to be stopped and give the following.

℞ Hydrarg Pillulae grs XVI
Pulv Doveri grs XVI
Creta Praeparata ℈ ij

To be divided into 8 powders and one taken every 4 hours, also the following:

℞ Antimonii et Potassae Tartras grs ij
Vinum Antimonii ℥ fs

5 gtts to be taken the hour between the powders.
The blood drawn yesterday was much buffed and cupped.

Jan 1st Slept well last night bowels moved several times; much pain in the side; mustard cataplasms ordered to be put upon his side and continue other treatment.

Jan 2d Pulse 80: respiration 18; skin moist; slept well last night; physical signs much the same, ordered Tinc Opii gtts x and continue other treatment.

Jan 3d Pulse 88: respiration 16, bowels moved three or four times during the night, air enters the affected side much better; much less pain; continue treatment.

Jan 4th Pulse 84: has suffered much from irritability of the bowels, directed to omit the antimonial solution but continue the powders, In place of the antimonial solution give vinum Opii gtts x, If the bowels are too much moved give Tinc Opii gtts x after each operation.

Jan 5th Pulse 76 full and strong: called to stool three or four times during the night: troubled with no cough: tongue clean and moist, Respiration 18 and natural: general symptoms moderated, Ordered to continue Blue mass and wine of Ipecac –

Jan 6th Pulse 94 full, soft, compressible and a little dichrotic; feeble respiration with slight dullness in the right side: face flushed –

Jan 7th Pulse 76, full and somewhat tense; face has lost some of its yellow hue; respiratory mur=mur somewhat roughened; little broncophony slept well last night; powders ordered to be stopped Physical signs so far absent that it is now impossi=ble to tell which lung was affected –

Jan 8th Continues to improve, having no unpleas=ant symptom: face of a brighter hue, From this time with a nourishing diet this man contin=ued to improve until he left the house in health –

# Pneumonia

The patient a native of North Carolina, a sailor, of medium size, aged 17 years, four days sick; entered the Infirmary Wednesday Dec 31st; previous health good, On last Saturday was taken with a severe chill, which was fol=lowed by a high fever; head ache, the pain in the back of the head; loss of appetite, He took some pills which moved his bowels freely — He attributes his attack to exposure to cold when heated and perspiring — Has had no delirium, but has all the time complained of dull pain in the right side: has also coughed and expectorated since the commencement of the attack; sputa rusty colored and tenacious: has slept badly owing to cough and pain — When he entered the Infirmary his condition was as follows — Pulse full and moderately firm: Has marked dullness over lower and posterior surface of right lung: fine crepitation over the same surfaces of both lungs, and bronchial blowing which was more

apparent over right lung — There was also in=
=creased vocal thrill and broncophony; no head
ache — Prof Chew ordered free venesection and the
following prescription —

℞ Pillulae Hydrargy gr XVi
Ipecac gr ix
Sodae Carbonas ℈ ij

Divided into 9 powders and one to be taken every
2 hours — also

℞ Vinum Antimonii ℥ fs
Antimonii et Potassae Tartras gr ij

gtts 5 to be taken the hour between the powders.
Jan 3d Slight epistaxis, Treatment ordered to be
stopped, and if fever should rise this afternoon
give an enema and nourishment —
Jan 4th Pulse 75 and very feeble, ordered

℞ Eupatorium ℥ i
Senega ℥ ij

Pour 1 pint of boiling water over them and sim=
=mer for 10 minutes, and give 2 tablespoons full
every 2 hours, also soup for dinner — If he get up

to stool again to day give Tinc Opii gtts x – He has dullness at base of right lung, bronchial respiration broncophony: slight crepitant rattle probably deep seated; rusty colored sputa, thick and tenacious –

Jan 5th Pulse 84 and weak, Treatment continued

Jan 6th Pulse 70, small and somewhat thready – skin hot and dry; face flushed; slight epistaxis; tongue clean and moist; slight dullness on the right side; slight broncophony; bronchial blowing, Has been to stool once or twice to day; slept tolerably well last night; some appetite; expectoration somewhat catarrhal –

Jan 7th Little dullness on the right and posterior side: bronchial respiration and broncophony – Powders directed to be stopped; Continue Senega and Eupatorium –

Jan 8th Continues to improve, no unpleasant symptom and considerable appetite – Ordered Soup

Jan 9th Continue Senega and Eupatorium – Under this treatment with a nourishing diet, he improved until the 12th inst, when he left the house –

Case of Compound Comminuted Fracture —

The patient an Irish boy aged 14 years, had been in this country [illegible] years [illegible] at Canton near this city and drove a cart — On Monday morning Dec 8th 1851, his horse became frightened and ran off against a bank, upsetting his cart, the upper rail of which fell across his leg inflicting a comminuted compound fracture of the tibia and fibula and dislocation of the external malleolus of the left leg — He had been troubled with intermittent fever since residing [illegible] the last two years, but had been exempt from it for the last six months, at the time of the accident he was enjoying health — He was brought to the Infirmary in good condition, the bones were replaced, a few pieces which came out [illegible] of the wound removed but the dislocation [illegible] [illegible] — He could move his toes readily and there was no [illegible] [illegible] [illegible] the [illegible] [illegible] of the parts. Prof. Smith saw him [illegible] [illegible] wounds on Tuesday morning Dec 9th after [illegible]

=mining it and perceiving with his usual accuracy of diagnosis the nature of the injury and not being able to reduce the dislocated limb [illegible], he pro=nounced without hesitation the propriety of an amputation to save the life of the patient — the friends of the patient refused to allow the limb to be amputated although [illegible] [illegible] on account of the [illegible] [illegible] — Under such cir=cumstances the best arrangements were made for his comfort and to affect a cure — His limb was placed in Prof Smith's [illegible] apparatus and a dose of oil administered —

Dec 10th Pulse 130 the wound very much [illegible] and patient suffers much pain which has been the case ever since he came into the house —

Dec 11th Pulse 125 suffers much pain, wound [illegible] discolored — Prof Smith thinks that there is now great danger from tetanus but that there is much irritation and inflammation [illegible] of an amputation at this time — ordered [illegible] [illegible]=ering lotion of [illegible] to be applied to the part

and bandage - Oil to be [illegible] and when [illegible]
[illegible] is removed give 8 grs of [illegible] [illegible] -
Dec 12th Pulse good; rests better last night than
he has ever before; some degree of [illegible] from
the wound
Dec 17 - Leg and ankle very much swolen and
dark colored; pulse good - Prof Smith made a lon-
-gitudinal incision [illegible] [illegible] the [illegible]
[illegible] and let out [illegible] of [illegible] and [illegible] - He
was ordered an anodyne at night - He is also
taking 3 grs of [illegible] of [illegible] [illegible] [illegible]
the powers of life -
Dec 15th Pulse [illegible] and wiry; the wound very fetid.
swelling very much decreased, The application of
the watery solution of opium was directed to be
discontinued and a poultice applied to the
part and the slings on the apparatus to be re-
-moved and replaced by new ones
Dec 16th Pulse frequent and small and [illegible]
- the wound suppurating - The patient took a [illegible]
of morphia last night without producing the de-

=ined effect of calming him, being restless all night.
Prof Smith ordered an anodyne to be administered
composed as follows—

℞ Morphiae Sulphas grs i
Ipecac grs VI
Nit Pot q s

Divided into 6 powders and one to be adminis=
=tered every night at bed time—
Dec 18th Countenance emaciated, Pulse 108, soft
and flagging—extensive suppuration, general
appearance not so favorable—
Dec 30th Being out of the city I have not seen the
patient since my last entry—His condition has
varied very much; at one time so low and failing,
and the appearance of the injured part so un=
=favorable, that Prof Smith had decided to ampu=
=tate, only waiting for the powers of life to revive
To day he seems to be better, the leg sloughing and
presenting a horrible appearance—
1852 Jan 5th Pulse 140 and feeble: the injured part
suppurating freely: complains of much pain

Jan 6th Pulse 136; leg pains very much at the [illegible]=cte. A window being left open near him on yester=day, he has to day a very severe sore throat, [illegible]=dered. Chloride of zinc is a wash to correct fetor, and poultices.

Jan 8th Pulse very frequent and weak: surface of the wound covered with healthy pus, and healthy granulations shooting out; complains more of sore throat than on yesterday, being scarcely able to speak.

Jan 10th Sore throat disappeared; general condi=tion improving.

Feb 1st The patient seemed to be improving up to the present time; but to day he has a fever, head-ache and pain in his leg; erysipelas has broken out on his leg to day — which is considered due to the same tendency to erysipelas that we find in many patients confined in the sur=gical ward of the Infirmary.

Feb 2d Pulse 140 and weak. Erysipelas has disap=peared. He has pain in the stomach.

Feb 3d Pulse 130, full and strong, has no particular pain to complain of, but a general ill feeling over his whole frame—

Feb 7th Prof Smith [illegible] Phila, [illegible] attacked—

Feb 11th Very much better to day, having no pain and pulse good—

It may be questionable whether it is admissible to present such an unfinished case as this in a thesis, but it seems to me that since the accident happened [illegible] I have learned it is apprehended from the expressed opinion of our learned Professor in Surgery that probably some fatal accident would occur and terminate the case at an early date— I think the case sufficiently interesting to follow up and which I shall do if I can have an opportunity—

All of which is respectfully submitted

by William D. [illegible]

[illegible]

A clinical report of Cases
in the Balt. Alms House &c.
respectfully submitted
to the examination of the
Provost, Regents & Faculty
of the University of Maryland
for the degree of
Doctor of Medicine
By — R. Wilson Linn
of A. A. County
Maryland

It is not without unfeigned diffidence on my part that I present the following pages for your inspection. First, because I feel that many imperfections must necessarily exist throughout them:- Secondly that these cannot possibly escape your superior judgement and discernment:- To those who like yourselves have been fully initiated in the 'Arcana' of our noble science, ennobled both by its objects, and its difficulties: whose every faculty, has been enlarged, by that best of masters, experience, nought like the following pages can either afford interest, or escape criticism.- Of this none can be more fully aware than myself. And I present them, not with any wish, or hope of credit for gleanings from any little experience I may have had, but merely with the hope that I have followed the general principles laid down by yourselves:- which I shall ever be proud to adopt.

1st Puerperal Convulsions -

Sarah Baldwin age 19 years, native of this State, strong and plethoric, all parts assumed well developed. Was admitted in Lying-in Hospital March 1st 1857. pregnant with her first child. I was called to her at 10 o'clock P.M. Made an examination (per vaginam,) and found she had entered upon the second stage of labor. Head presentation and first position of the vertex, (occiput towards the left acetabulum) The os uteri and soft parts were well dilated. Bag of waters had ruptured and everything seemed to be going on well but slowly.

the interval between the pains being from 20 to 25 minutes, her pulse was strong, full, and about 90 in minute, face flushed and head hot. She complained of pain in the head, thought to be considerable cerebral excitement. Labor advanced very slowly until about 2 o'clock (March 2nd) when the pains became much more severe and oppressive, which continued for about two hours when she was taken with convulsions consisting of alternate contractions and relaxations of the muscles of the whole body. She was in a state of insensibility, her pulse was quick and incompressible, the [illegible]

and Carotid arteries throbbed with great violence, pupils dilated, respiration hurried and difficult, in fact so much so that the patient was almost asphyxiated, her lips were livid, mucus accumulated in ~~th~~ her throat evidenced by rattling; her teeth were clenched, with frothing at the mouth; faeces and urine passed involuntarily. I first tried affusions of cold water and then bled her from the arm to the amount of ~~about~~ 15 oz, before the stream stopped she revived; this however produced no appreciable alteration in her pulse; during the intervals the pains ceased entirely, and she lay in a state of languor and-

exhaustion; In about 15 minutes another paroxysm came on, presenting the same appearance as the first. I again bled her about 2 oz from the same orifice; this had the effect of decreasing the force and incompressibility of the pulse; but in a few minutes, the symptoms which had been before moderated by the bleeding; again resumed their former violence. The paroxysms continued to recur and the same treatment was resorted to, until 7 O'Clock A.M. when the pains came on in much quicker succession, and were more expulsive in their character, which continued for about half an hour, when she was delivered of a fine male child, [illegible]

I deferred tying the cord for a few minutes on account of its pulsating so violently, and on feeling above the the pubis, I found the uterus had contracted sufficiently to convince me that there was not another child; and upon examination discovered that there was considerable flooding, so much so, that I deemed it advisable to deliver the placenta at once; which was attempted by introducing the hand in a conical form and following up the cord, but I soon discovered that about half of the placenta was attached to the walls of the uterus; but this was easily removed by gradually introducing the hand between it and the walls of the uterus.-

using but little force and rather assisting than supplanting the uterine efforts. The hemorrhage immediately ceased up to this time, and as well as I could judge she had lost about 30 oz of blood by flooding. In a short time the paroxysm came on again, but the symptoms had changed considerably, her pulse was much more compressible and she presented the appearance of one laboring under general anæmia; gave her Brandy ℥i which was swallowed with difficulty & followed by Tinct Opii ʒi a portion of which was discharged by vomiting. in 10 minutes repeated the dose which had the effect of moderating the violence of the paroxysm and

increasing the length of the intervals. As the day advanced, the symptoms became more and more ameliorated, until early in the evening she had her last paroxysm, and fell into a deep sleep, in which state she remained until morning (March 3rd) She awoke very much relieved, her pulse was full but compressible, skin cool, pupils nearly the natural size, tongue moist and covered with a white fur, directed the room to be darkened and the patient to be kept as quiet as possible and not to be allowed to raise her head on any consideration, for fear of syncope. Ordered. ℞ "Ferri Ammonio-Citratis ʒj Aquae ℥vj" To be taken - Table spoonfull every hour. Her diet consisted of a little Panada

of which however she ate but little.
This treatment was continued throughout the day and at night ordered. ℞ Pulv. Doveri grx. At once.
(March 4th) Slept well the previous night had an evacuation of the bowels this morning, pulse more regular, appetite good, and evidently improving in strength and other respects. continued the same treatment.
(March 5th) Slept well during the night appetite good and in fine spirits, discontinued all medicines and ordered Medium diet.
(March 6th) Found her sitting up in bed and evidently convalescent. And in a few days she left her bed as well as the generality of women are after the period of parturition. though she had lost between 80 + 100 ℥ of blood.

2nd

# Acute Laryngitis

Sarah Trevelyan an Americano, age 25 years entered Hospital April 1st 1851. For several days previous to her entrance she had been complaining of severe coryza, hoarseness, and uneasiness about the larynx; When she entered the following symptoms were presented:— Countenance anxious, lips livid, tongue dry and coated with fur, dyspnoea so great that she was obliged to remain in a sitting posture, deglutition difficult and painful, great uneasiness over the larynx & trachea, voice hoarse and whispering, skin dry, pulse 75, bowels constipated; I immediately applied 12 leeches over the larynx, the bites of which were allowed to remain open, and the blood to ooze out, until signs

of syncope appeared when they were stopped by the application of Nitrate of Silver, ordered Antimonii et Potassae Tartratis gr 1/4 every hour. and an injection of Ol. Ricini ℥ij Mucilag Acaciae ℥viij at once.

April 2nd The symptoms presented a much more formidable appearance, breathing more difficult and hurried, in fact so much so that the patient was almost asphyxiated, and occasionally by a painful effort she would expectorate a thick tenacious mucus; deglutition had become so painful, that she could no longer swallow the Antimony; her voice was nearly gone; the least pressure over the larynx caused intense pain; pulse [illegible] skin dry & hot, had one evacuation

of the bowels during the night, ordered 6 more leeches to the throat, opened a vein in the arm and bled her to the amount of 12 oz, also Unguent. Hydrarg. fort. to be rubbed in the groin and axillae and the injection repeated.

Evening 8 o'clock. Breathing somewhat easier, still unable to lie down, pulse sunken, other symptoms somewhat ameliorated;

April 3rd. Spent a restless night, the symptoms somewhat relieved, breathing much easier, the mucous expectorated was of a healthier consistence, deglutition much less painful, voice returning, skin moist bowels open, urine

ed. Antimonii et Potassae Tartratis grij; Aquae ℥i. To be taken a teaspoonful every 2 hours. Hydrargyri Pro. Chl. grij Pulv. Doveri grj to be repeated every 4 hours.

April 4th Slept some during the night, but was occasionally aroused by a sense of suffocation, can lie down and breathe with much less difficulty, all the other symptoms improving but continued the same treatment for a few days when she was discharged from the Hospital perfectly well.

3rd Puerperal Fever—

Annie Waters age 31 years, native of Ireland, was brought to bed of her first child. Balt. Alms House, at 12 O'Clock M. (May 8th) Labor proceeded without the occurrance of any particular circumstances until 10 O'Clock P.M. when she was delivered of a male child. The placenta was not delivered until about two hours after the birth of the child, after which, the patient fell into a deep sleep and remained so until morning.

(May 9th 10th 11th) No unusual symptoms. After pains very mild, patient in good spirits, ordered a dose of Ol. Ricini.

(May 12th) Oil operated freely, after pains relieved, discharge natural, complains of pain in the breast; mammal enlarged and indurated, with nipples

-inverted, so that it is impossible for the child to get any milk from them. Means were used to form nipples, which however proved unsuccessful.

(8 O'Clock P.M.) Bowels regular, pulse natural, skin cool, discharge free, no pain in the abdomen, and in good spirits; mammae still hard and painful, finding it impossible to draw any milk, made applications of Ol. Olivae & Camphor to dry them.

(May 13th) Slept well during the night, but in the morning in unusual good spirits laughing and singing to her child.

(10 O'Clock A.M.) Sent for, and found she had about ten minutes previous, had a severe rigor, skin hot and dry, pulse (130) full, and strong, with violent headach. Took about 16 oz of blood from the arm, which reduced the fullness & strength of the pulse, the-

pain in the head, was somewhat relieved;
in half an hour afterwards, the pulse
still being frequent, took about 16 oz
more, of blood from the same orifice.
About this time, she began to feel pain
about the illiac regions, or bowels.
℞ Hydrarg Chlor. Mit. grij Pulv Opii grs. ij to be
repeated every hour and Unguent. Hydrarg
to be rubbed in the groin and axilla, 3 or
4 times during the day; and flannel
saturated with hot oil of Turpentine,
to be applied over the abdomen.
(8 O'Clock P.M.) Found her breathing slowly,
pulse small and contracted, skin
cool, mind very dull, not answering
when spoken to. Opened a vein in
the arm and took about 10 oz of blood
and while it was running, the pulse
became much stronger, skin warmer and mind
clearer. Continued the powders of Calomel & Opium.

(May 14th) Did not sleep until nearly morning; when she fell asleep and remained so until 9 O'Clock. when she awaked feeling much better, had no pain on pressure over the abdomen, nor headach, pulse 80, some appetite, diet consisted of a little Panada. during the day she had considerable fever, in pulse rose to 120. ordered the same treatment to be continued.

(May 15th) Did not sleep much during the night, pulse 120 but compressible, no pain in the abdomen, discharge decreased bowels costive. ordered, ℞ Magnesia sulph ℥j.

(8 O'clock P.M.) Medicine produced two evacuations, feels somewhat stronger, appetite improved; continued the same treatment.

(May 16th) Complains of having suffered much through the night with-

pains ~~with~~ the bowels and purging; gums sore from mercurial influence, pulse (100) skin warm and moist, no pain on pressure ~~over~~ the abdomen, uterus feels exceedingly hard, and prominent. general appearance better, ordered ℞ Pulv. Opii grj; Acet. Plumbgrij - taken at once

(12 O'clock) Still complains of pain in the bowels increased at stool, ordered the lead and Opium to be ~~continued~~ repeated and small injections of starch after each operation.

(May 17th) Slept well during the night, free from pain in the bowels, the discharge being checked, complains of mouth being very sore, the discharge of saliva being very copious, ordered the Calomel & Opium to be discontinued, and a mouth wash consisting of water and Hydrochloric Acid, to be used.

(May 18th 19th) Gradually gaining strength pulse still frequent. ~~except~~ has no pain.
(May 20th) General appearance better, bowels costive, ordered a mild apperient.
(May 21st) Medicine operated freely- Appetite good.
(May 22nd) Free from all pain bowels regular. and is convalescing rapidly.

114th **Cholera Morbus**

James Miles age 56 years, native of Ireland. was taken June 25th 1857 at 5 o'clock A.M. with spasmodic pains through the abdomen, with occasional cramps of the muscles of the extremities, which was followed by repeated vomiting and purging. He continued in this state without medical aid until 8 o'clock when the vomiting and purging had become almost incessant, the matter ejected being of a dark green and bilious consistence. pulse small, frequent and feeble, eyes sunken, respiration short and quick and his body bathed in cold sweat complains of extremities being very cold, great thirst and burning at the stomach. Ordered 14. Brandy ℥ss in portions every 15 minutes

and ℞ Hydrarg. Proto Chl. gr xij. Ext. Colocynth. gr xij
Pulv. Opii gr ij. Ft. pil. No xij. To be taken
one every 15 minutes. also sinapisms
to be applied, over the abdomen and
on the extremities.

(7 O'clock) The vomiting and purging
had ceased, spasms less severe, pulse
little fuller, complains of great lan-
guor and exhaustion. The sinap-
isms had caused considerable pain,
ordered them to be discontinued, and
the pills to be given at intervals of
3/4 of an hour. Lemonade to be drank
ad libitum.

(Evening at 3 o'clock). Had not vomited
or purged since morning, pulse much
stronger and fuller, skin warm and
dry, feels some little pain through
the abdomen, had not passed
any urine through the day.

Continued the same treatment
and put him on low diet.
(June 26th) Slept well during the night
feels much better, pulse nearly nat-
ural, skin warm and moist, but
no evacuation of the bowels or blad-
der since the morning previous,
introduced a catheter and drew
off about 1½ pints of highly colored
urine, ordered a mild [illegible] & pills
and the pills to be discontinued.
(June 27th) Complains of going to stool so often
(bowels opened 10 or 12 times during the night)
and pain while at stool, passed his water without
difficulty, ordered of Tinct Opii ʒi. [illegible] ʒij
aqua ʒiij. [illegible] every 3 hours.
(June 28th) Had but one operation since
last night, stopped the [illegible] this
[illegible] and in a [illegible] he
was discharged from the hospital [illegible] well.

[June] 5th Acute Articular Rheumatism

Louis Myers age 35 years, native of Germany, entered the Hospital July 30th/61. For several days before he entered, he had experienced severe pain through the right knee, and slight pain in the right wrist. On the evening of his admission, the pain in the knee was so severe that he could not walk without suffering excruciating tortures. His knee was red, swollen, hot and so tender that he could not bear the slightest pressure: his pulse (75) full but compressible. Bowels costive. Ordered R. Magnesiae Sulphatis ℥i to be taken at once. R. Chloroform ʒi Lini Camphor ℥i of ammonia ℥ß. Apply to be rubbed on the knee. Low diet.

July 31st During the night the pain

in the right wrist had become very acute, presenting the same appearance as the knee, [illegible] [illegible] the [illegible] during the night, pulse and other symptoms the same. ordered 4 cups around the knee.

(Evening 8 O'Clock) Pain in the joints still very severe, and increased on motion pulse (110) strong and full. bled him from the arm about 20 oz. (which on cooling presented a buffy appearance) & ordered. ℞ Hydrarg Chlo. Calo. gr xij Opii pulv. gr j Ipecacuanha. gr ij ft. S. At once.

(July 30th) Pain and heat slightly decreased. [illegible] bowels costive. ordered ℞ Magnesiae Sulphatis ℥j at once ℞ Vini Colchici gtt xx* "To be taken 3 times a day.

(July 31st) Symptoms remain about the same.

(August 1st 2nd) Pain in the knee disappearing pulse same. bowels regular & appetite improving,

(August 3rd) Heat and redness has entirely left the knee, but still complains of some desperate pain in the knee which still painful, heat and the swelling gradually disappearing, ordered ℞ Ol. Olivæ ℥i, Ung. Ammon. ℥iii to be rubbed on knee & wrench, continued the Colchicum.

(August 4th 5th 6th) The pain in the joints have nearly disappeared, appetite better ordered him Medium diet & the Colchicum to be stopped.

(August 7th & 8th) Convalescing, patient can walk but the fear of pain makes him very [illegible] bowels costive, ordered ℞ Mag. Sulph. ℥i at once & ℞ Pulv. Doveri gr. x at night.

(August 9th 10th) Continues to get better can walk with less difficulty, bowels open, appetite good, ordered him full diet. From this time he continued to get better without taking any more medicine for several days, when he was discharged from the Hospital perfectly well.

# Pleuro-Pneumonia

Case 6. Frances [illegible], Assistant in the Female Hospital, age 28 years, was admitted as a patient, on morning of August 4th 1851. She was subject to inflammation of the Pleura, on the slightest exposure, having had several attacks within my knowledge. The evening before she entered, she had a slight chill, followed by violent headache, thirst, pain in the [illegible] & in back, anorexia, nausea & vomiting a green bilious matter. When she entered the following symptoms were presented - great heat of skin, flushed face, violent headache, nausea, acute pain in the left side augmented by inspiration, and a dull heavy pain posteriorly, near the base of the left lung, respiration short, [illegible]

pulse (100) full & incompressible, On auscultating the left side, over the seat of the acute pain, I heard a soft grazing sound during inspiration and expiration, and over the base of the left lung posteriorly, I heard (during inspiration) the dry crepitant râle (peculiar to Pneumonia). Her bowels were constipated. She had no cough or expectoration. I first bled her from the arm to the amount of 20 oz, which had the effect of diminishing the strength and fullness of the pulse. Ordered R. Hydrarg. Pro. Chl. gr x To be taken at once, and a Seidlitz Powder to quiet her stomach.

Evening 8 O'clock- Has had one watery evacuation of the bowels. No change in the symptoms. Ordered R. Hydrarg. Protochl. gr ij Pulv. Doveri gr ii - to be repeated every 3 hours 6 cups to the left side over the seat pain.

and sinapisms on the back of the neck for the headache - which however produced but little effect.

August 5th. Slept but little during the night. pain in the head but slightly decreased. On auscultating found the the friction sound had become much rougher and scraping - showing that there was [illegible] deposited lymph on the surface of the Pleura, pulse was full & strong - I bled her again from the arm about 12 oz - which had the effect of decreasing the dyspnoea and pain in the side and head.

8 O'Clock P.M. "Had felt much better since morning all the symptoms seemed to be ameliorating until towards night her head began to ach more violently than it had before - impulse was [illegible] full & incompressible, respiration

short and hurried. skin hot + dry, stomach very irritable, auscultory signs the same - Ordered R Vin. Antimonii ℥i Tr. Opii gtt iij to be repeated every 2 hours provided she does not vomit, & Cup'g to the left side & on the back of the neck + sinapisms to the bottom of her feet.

August 6th Slept but little during the night, the second dose of Antimony produced vomiting and was discontinued, pain in the side + head easier, pulse reduced, on auscultating found that the crepitant râle had disappeared and was succeeded by the vesicular murmer - friction sounds but slightly decreased. Continued the Calomel and Dovers powder.

August 7th Slept some little during the night. had not passed any urine

for a day - the other symptoms remain the same. ordered ℞. Sodae Bicarb. Potass. Bicarb āā ℥i Extr. Hyoscyami gr x Sol. Morphiae ℥i Aquae ℥vj M. "To be taken a Table spoon full every 4 hours.

August 8th Feels much better, the head-ache nearly disappeared, and the pain in the side somewhat decreased, less fever, pulse (80) compressible - urine plentiful. bowels regular - continued the Calomel and Dovers Powders -

August 9th Looks quite lively, pulse natural, respiration easier, slight pain in the left side - Crepitous sound was no longer perceptible. complains of her gums being sore ordered ℞. Pulv. Ipecac. gr xij. Sodae Bicarb ℥i. M. ft. pulv. No xij - To be taken one every 2 hours & the Calomel & Dovers powders be discontinued.

August 10th Slept very well during the night. Skin warm & moist, pulse regular, slight pain in the side during a deep inspiration.

August 11th Improving fast. Skin warm & moist, pulse natural, no pain, no embarrassment of the respiration, no cough or expectoration which however was absent through the whole disease.

Ordered R. Decoct. Cinchonae, to be taken a wine glass 3 times a day. From this time the patient continued to get better and in a few days she was discharged from the Hospital perfectly well.

Case 7. Pneumonia

Susan Baley age 32 years. native of Ireland. was admitted in Hospital Octr 17th/51

"For several weeks previous to her admission she had been engaged in washing clothes which necessarily exposed her to Cold & Moisture.

"The day before she entered the Hospital she was taken with a chill, followed by great heat, pain in the right side, headach, and anorexia.

When she entered the following symptoms were presented-, pain in the right side below the scapula, increased during inspiration, cough frequent, sputa thick and transparent- skin hot & dry- bowels constipated, respiration short & hurried pulse strong & frequent- On percussion found obscure resonance on the right side from inferior angle of the scapula to the base of the thorax—

and on auscultation found a fine crepitous râle over the same surface. Vesicular murmur loud & clear every where else-

I immediately bled her from the arm to the amount of 16 Oz which on cooling presented a buffed appearance- and ordered ℞ Magnesiae Sulphatis ℥i To be taken at once.

Evening 8 O'Clock About the same- pulse full & frequent- pain in the side a little decreased- respiration still hurried, had one copious evacuation of the bowels- I put 4 cups to the affected side & ordered ℞. Ant. et Pot. Tart. gr V. Muc G. Acaciae ℥ij To be taken a tea spoonfull every 3 hours-

October 18th Very delirious during the night

Pneumonic symptoms stationary- bowels open- continued the same Treatment

October 19th During the night the symptoms had become much worse. respiration short & hurried, pulse full and incompressible, skin hot and dry, cough frequent (very much) with expectoration of a thick viscid sputa, the pain in the side had returned- complains of great thirst. On auscultating found the crepitous râle had extended over a larger surface and was much louder also dulness on percussion- I again bled him from the arm to the amount of 10 oz which on cooling presented the same appearance as that of the first

bleeding: continued the Antimony
Evening 8 O'Clock Somewhat better:
pain in the side and dyspnoea
a little decreased, pulse dimm-
ished in fullness & frequency.
October 20th Did not sleep any, dur-
ing the night, countenance aux
ious: bowels open - other sympt-
oms stationary. Sput 6 cups to
the affected side & ordered the
Antimony to be given at inter-
vals of two hours -
October 21st Slept a little during
the night. Pneumonic symp-
toms somwhat ameliorated
pulse more natural bowels
free.
October 22nd Considerable impro-
vement. respiration more free
pain in the side nearly disappeared

Sputa less red & viscid and expectorated with much less difficulty cough somewhat diminished, skin warm and moist. On auscultation found the crepitous râle had nearly disappeared. continued the Antimony October 23rd. Improving fast, slept well during the night. breathing easier. the redness & viscidity of the sputa much diminished, cough less, appetite improving. crepitous râle disappeared, and is succeeded by the vesicular murmur, sonorousness of the chest also returned; ordered the Antimony to be discontinued and gave her a little cough mixture which she took for a few days when she was discharged from Hospital well.

Case 4th

# Puerperal Fever.

Martha Pittings, a married woman aged 24 years, entered the Lying-in Hospital Nov. 18th/57 pregnant with her first child. On 20th at 11 o'clock P.M. she was taken with labor which lasted (without the occurrence of any notable circumstances) until 1 o'clock that night when she was delivered of a fine male child. In about 10 minutes the Placenta was discharged by the contractions of the uterus. After this nothing unusual occurred until the morning of the 23rd when she was taken with a severe chill which lasted about an hour. I saw her soon after the chill & found her lying on her side with her thighs flexed on the pelvis, countenance anxious, cheeks flushed, skin hot & dry.

tongue moist, & coated with a brown fur, respiration hurried, pulse 115 small and corded, great pain in the abdomen augmentd by pressure, Lochia suppressed. I immediately bled her from the arm to the amount of 20 ℥, which produced signs of syncope; the blood on cooling presented the ordinary appearance of inflammation. ordered an enema of Ol. Ricini. Ol. Terebinthinae aa ℥i Mucilag. ℥iv at once & Rx. Hydrarg. Pro. Chlo. gr xx Pulv. Opii gr ij M. ft. pil. No ij - S. one immediately and the other at night. also hot hop fomentations to be applied to the abdomen. Nov. 24th Slept but little during the night, the symptoms this morning somewhat aggravated, pain increased, abdomen tympanitic, respiration hurried, pulse 120 and

increased in strength and fullness, bowels opened twice during the night; I bled her her again from the arm about 13 oz & ordered ℞ Hydrarg. Pro-Chl. gr XX Pulv. Opii gr iv. ℞. ft. pil. no xij S. one every 2 hours.

Evening 8 Oclock Symptoms stationary. ordered ℞. Pulv. Doveri gr x s. at once

Nov. 25th Dozed a little during the night; the disease still progressing. pulse increased in frequency, tympanitis more evident, Lochia not yet reappeared, bowels constipated ordered 12 Leeches to be applied to the abdomen, bowels to be opened by a Turpentine enema and Calomel & Opium to be continued as before.

Evening 8 Oclock. no better. bowels opened once during the day, [illegible]

stomach irritable; ordered Effervescing draughts to be taken every 3 hours and ℥ij of Unguent. Hydrarg. to be rubbed in the groin & axilla every 3 hours.

Oct 26th Did not sleep any during the night, the pain in the abdomen had become much more severe shooting through to the hip & thigh, pulse 130 small and compressible, great anxiety of countenance, intense thirst, but stomach so irritable as not to retain ice water in small quantities, bowels open; ordered Pil. Hydrarg. to be substituted for the Calomel.

Evening 8 O'Clock About 12 O'Clock the pain in the abdomen gradually disappeared, but vomiting became more frequent & laborious

countenance anxious, bowels had not been opened since morning, had vomited several times during the day, she complained of pain in the back & shoulders, and intense thirst, felt a great desire to sleep but was prevented (as she said) by a ringing in her ears, great jactitation, pulse frequent & feeble, tongue brown & dry. A fatal issue was now apparent, and there was sufficient reason to believe that suppuration had already taken place, I could do nothing better than endeavor to alleviate her suffering as far as possible. I ordered a little wine to be given at short intervals & an emollient clyster to be given at once discontinued the ~~[illegible]~~ all medicines

Nov. 27th Passed a restless night the abdomen free from pain, pulse scarcely perceptible, breathing short and laborous, tongue brown dry and teeth covered with sordes voice very weak. still complains of pain in back & shoulders had one evacuation of bowels this morning, which was of a dark green appearance & of very foetid odour. continued the wine — I did not see this patient again, but was informed by the nurse that she died about 2 o'clock that day.

Post Mortem

The convolutions of the intestines were bound together by bands of false membrane, which were easily broken and bathed with pus. The ^[the peritoneal coat was of a dull hue] uterus ^[with a thick pus] was not unusually large, and contained a creamy matter

resembling pus. The fundus was but slightly congested. There was also some congestion of the mucus membrane of the stomach.

R. Ir. C.

An

Inaugural Dissertation

on the

Diagnosis and Treatment of Fractures

Submitted

to the

Examination

of the

Provost, Regents and Faculty

of the

University of Maryland

for the degree

of Doctor in Medicine

by

James Comfort, M.D.

of

Dayton Ohio.

To S. R. Smith M.D.

Professor of Surgery in the University of Md.

This Essay most respectfully inscribed,

in admiration of his justly appreciated

talents and great skill which have

placed him among the first surg-

eons of the age, and in part ac-

knowledgement of lasting gratitude, for

his untiring exertions to instruct,

both by his public and private lect-

ures, his

Pupil.

The subject of Fractures is one of great importance and interest both to the surgeon and patient. It is necessary to be well understood, in order that clear and rational notions may be had concerning their diagnosis and treatment. Fractures have been defined "a solution of continuity of the bone, by which its mechanical functions are destroyed." The bone is purely a mechanical instrument, and separate from the surrounding tissues has little vitality of its own. Bone is composed of both earthy and animal matter; the phosphate and carbonate of lime and magnesia make up the earthy portion and the animal parts are composed of gelatine. The equilibrium of these components is destroyed by various diseases, and such deficiency of either of its parts as are made man-

fect - by accidents dependant - on loss of
strength of the mechanical supports of the
body. When the animal constituents are
below the healthy standard, there results
fragilitas ossium, which is present in the
bones of old persons where absorption goes
on faster than nutrition. When the earthy parts are wanting to any great degree there follows mollities ossium in which disease the bones can be bent - and distorted in any form and will not resist the edge of the knife. The penetration, in such instances, is thicker than in health and great ammounts of animal matter are present. Both of these states of the bones are great influence in fractured fractures and distortions and concern much their restoration to their normal condition. In cases where gelatine and fat are wanting fractures often occur in a manner

that seems so trivial. a slight fall upon the limb or a slight blow is sufficient to sever the continuity of the bone, and when the opposite deficiency is present the bones can be bent in various forms and no fracture result. The ossification of the bone begins in three points and the complete union of these does not take place, by various matters, until about the age of puberty. These three points of ossification, in the rudimentary state, consist of gelatine which in a short time have the phosphate of lime and other earthy matters deposited in them; from these points radii of ossific matter extend through the gelatinous mass that has assumed the form and direction of the future bone. When the blood vessels which these matters are deposited become

hidden by the great amount of
such bony deposits. It is by this pro-
cess that the condyles and heads of the
bones are formed separate from the shaft
until entire ossification has become com-
plete this peculiarity of the epiphyses being
separated from the shaft by cartilage
has great influence on the progress of
disease that affects either one of the
extremities. In scrofulous disease of the
shafts of the bones, the joints remain in-
act and nice uses when the extremities
are affected the disease is limited by the
peculiar structure of the epiphyses. What
there is in the structure of these parts
of the same bone that should cause con-
fine the disease to themselves, is dif-
ficult to give a satisfactory explanation.
When the whole ossification has become
complete the bone is supplied with

absorbents and blood vessels, and the functions of nutrition and reparation go on as in all the tissues of the body, though slower. The periosteum invests the whole bone with various degrees of closeness in different parts of the body. This membrane is of fibrous structure supposed by some to be very essential, indeed absolutely necessary for the deposition of osseous matter preparatory to the complete union of bone. This opinion is not sustained by observation and experience, as instances are on record of well authenticated where pieces of bone with this membrane attached have been removed and the depression again completely restored by reproduction of bone, which never could have taken place was it so requisite to osseous formation. The periosteum, nevertheless,

performs an important part but not more so than the surrounding structures.

When fracture of the bone occurs, the surrounding soft parts are more or less injured and pour out blood around the point of fracture; this is the first step in the process of separation, then lymph takes the place of the effused blood, this lymph is converted into to cartilage and this in time becomes bone. This means nature resorts to in forming a splint, by which the extremities of the bone are brought into apposition and maintained in situ for this osseous deposit seizes hold, as it were of the two ends of the broken bone and thus will not permit any motion. This callous is much larger than the body of the bone itself. If the bone be not well supported during the process of healing

this provisional tumor will be much
larger than it would be if the proper
attention was paid to it. In many cases
when the produced limb is kept
at rest entirely and properly sup-
ported the tumor will not be form-
ed at all, but nature will pro-
immediately to unite the bone with
the proper osseous formation. The man-
ner in which the effused lymph
goes through the various changes to
form callous is similar to
that of the formation of bone in the
callus. After the callous has been
deposited and the bones kept at
rest absorption takes place im-
mediately and when the union
is complete and firm this provision-
al splint is removed by absorption,
as its presence is no longer required.

It seems then that nature instinctively adapts her means to meet the objects to be accomplished: when no or insufficient splints are employed she effuses a large quantity of callus which embraces the fragments, but when complete support is given she prepares no splint of her own but proceeds directly to the restoration of the injury, not wasting her energies and retarding the union. Hence how important it is to observe and practice the precepts taught by nature in the treatment of fractures.

Fractures are produced by various forces. These forces may be either external or internal to the body, or they may be applied directly or indirectly. The operation of these forces may produce simple fracture of the

bones or it may be compounded with
protrusion through the soft parts. Ei-
ther violence may cause comminu-
uted fracture or may it be compound-
ed with laceration and protrusion through
the integuments or may any of these
injuries be complicated with distruction
of some important blood vessels in its neighborhood.
Each of these varieties require to be ac-
curately recognised and the proper treat-
ment adapted to their peculiarities. The
direction in which the force was appli-
d and the kind of violence should be con-
sidered in order to arrive at an accu-
-ate diagnosis of such injuries. The
particular bone itself and the position
of the bone in which it occurs as well
as the point of fracture should be care-
fully examined as this will sometimes
aid in
whether the fracture be transverse oblique

or longitudinal. Some times fracture of the long bones will result from the forcible contraction of the muscles. as in violent voluntary exertions and in convulsive diseases.

The diagnosis of fracture is very difficult in some part of the frame. especially near the joints. but to verify all the general signs together, in most cases will the injury be ascertained. It is most likely to be confounded with dislocation than any other accident. The most obvious signs of fracture, are deformity and loss of function. Deformity is caused by the continuity of the bone being destroyed and the muscles that are inserted into the fragments contracting and bringing them into an abnormal relation: and also the weight of the limb compressing the

produce deformity, by the lengthening of the limb and the bones joining at an angle. The loss of function is produced by the mechanical support which gives leverage and firmness to the muscles, being broken. And also may the bones become entangled in the soft parts about the seat of injury and cause the muscles to act spasmodically and at an unusual advantage. thus increasing deformity and loss of power.

The pain which is experienced in fracture is not as great as that which is present in dislocation, because in the joints there is a vast expansion of nerves which are pressed upon by the extremities of the dislocated bones and the membranes of this region are put violently upon the stretch. Greater suffering, ecchymosis result in fracture than in

Syndiastasis

Crepitation is heard when the two extremities of the bone, are rubbed together. The proper mode to obtain the sound, is to take hold with the hands, of the fragments and move the one velocity over the other or to rotate one while the other is held firmly. This manner, is not infallible, and might be mistaken, by the young surgeon because if the seat of supposed fracture be near an inflamed joint and the limb moved for the purpose of producing crepitation, the roughened bones rubbing on each other will emit such a sound which will simulate it very much. And also can the same sound be heard in certain inflammatory affections of the thigh, when one muscle gliding over the other in

give out a sound resembling it very much which requires the experienced ear of the practiced surgeon to diagnose. Crepitation is sometimes an obtuse sound particularly where the bone is covered with large masses of muscle, in such instances the stethescope becomes a valuable auxiliary in ascertaining the true state of things.

In the treatment of fracture many things are to be observed. In treatment of comminuted fracture where the integuments are not injured, and should there be many small fragments of bone and some separated at considerable distance from the immediate seat of injury, they should be untouched and allowed to remain in the limb because they possess a certain amount of vitality which will be sufficient, in most cases, to unite

them with the shaft of the bone. If, hon-
ever, their vitality should be entirely destroy-
ed they will be removed by suppuration
or it may be necessary for the surgeon to
interfere and take them away. The
indications for the treatment of the soft
parts involved are the same as in in-
stances when they are alone concerned. When
there is a high degree of inflamma-
tory excitement it may be necessary to
resort to general blood letting or when
there is much local inflammation it
may be requisite to abstract blood by
leeches and to sorthe the irritability
and disturbance by the application of
evaporating and cooling lotions and
the restriction to low antiphlogistic
regimen. Some times instead of
having to subdue inflammation it
may be requisite to produce it by

various imitative means, in order that union may take place. But the indications for the treatment of the fracture itself are far more important than attention to the concomitant circumstances. The first indication to be fulfilled, is to place the limb in such a position as to relax the muscles and bring the fragments in complete apposition. Generally not much difficulty will be experienced in bringing the fragments in apposition, but sometimes the limb will be so entangled in the soft parts that much trouble is necessary to extricate and bring them in proper relation. Force may be employed in the attempt to bring them over in the same line in a disadvantageous manner so that the contractions of the muscles will resist all efforts at reduction. By the

fracture be oblique the contractions will constantly displace the fragments as soon as the extending force ceases, hence the treatment requires that the kind of fracture should be known and an equable and proper extending force constantly employed. The muscles of the injured limb are more or less irritated and inflamed and when an attempt is made at reduction they resist tenaciously the force exerted against them and more especially is this resistance present when that force is applied suddenly or not made to act on all parts alike. The reduction of the fracture is important and often times difficult. Yet the most important of all and that which must surely be to the will of the surgeon is the retention of the fragments in their proper position

in order. That union may take place without deformity and with as little pain and suffering as possible. The difficulty of retaining them in their proper position does not consist alone in the tendency of the limb to displacement by contractions of the muscles. but the fragment may be displaced downwards by the weight of the limb or it may be drawn out of line laterally by the unequal contraction of the muscles on the sides of the bone, or the limb may change its position by rotation on its own axis. so that the extremities will not coincide. or the contractions of the muscles on the upper portion will be sufficient to cause it to override the lower. The liability to such accidents will depend very much on the position and kind of fracture and the weight of the limb below the seat of fracture.

It is evident that the longer the limb is below the seat of fracture the greater will be its leverage in producing motion and loss will the limb follow the motions of the upper fragment and thus cause displacement and irritation, hence should the whole limb be commanded when an attempt is made to place it in a position favorable to its union. These indications are most admirably and successfully met in the apparatus invented and recommended by Prof. S. D. Smith. for the fractures of the thigh and leg. Also does he most beautifully meet the same indications in this angular splint for fracture of the forearm. In these most excellent apparatus the whole limb is under complete control of the same splint and both fragments move simultaneously thus keeping them in coaptation and their relations

maintained in all respects. Another important indication to be observed is that the limb shall be placed in such a position that the flexor and extensor forces shall be equally balanced and these forces shall be equalized by giving as little inconvenience to the patient as possible. Sometimes the force necessary to extend the limb and retain it in its position is injudiciously applied, so that the object is defeated and almost intolerable anguish caused, which in a great degree retards the health and speedy union. In applying any apparatus to a broken bone the ease and comfort of the patient should be consulted in a prominent degree, because whatever tends to render him uncomfortable, depresses his whole system more or less and affects directly the restoration of the broken limb. It no matter how gentle the pressure may be that is applied to

to any living tissue if it be irregular and long continued will result in great pain and irritation, which in course of time will be sufficient to cause destruction of the part to thus involved. No matter of what material any support may consist if it be suited and well adapted to the form of the body, there will be no sense of weight or pressure felt, because it is equable and regular. These facts should be observed in all the mechanical appliances which are made to the human body. If it be a part and limb that has to be kept in the recumbent position make the support regular and not allow one part to sustain the weight of the other. Sometimes, sometimes in treatment of parts of thigh or leg this part is overlooked the limb will become much irritated and painful in consequence of the

might of the limb being allowed to rest on it. this may be supposed to be the remedy of insufficiency of cushion and to remedy the defect more cushion is placed under the heel and the matter made worse by more of the weight being thrown upon the heel in consequence of the elevation of the leg. This may be overlooked until changing of the parts takes place. It makes but little difference whether the support of the limb be hard or soft it will adapted to it. The only advantage of soft support is that it presents greater surface and thus distributes the pressure more equally. The support which is given to a limb should not be applied directly to the seat of injury, because there are always more or less contusion and consequent inflammation. The bandage should not be ap-

plied directly to the limb for the pur-
pose of maintaining the fragments in
their place, because it is evident that
it could not be fixed securely enough
to overcome the contractions of the mus-
cles without causing the circulation
to cease and consequently mortification
and loss of the limb. When the bandage
is applied directly to the limb it may
not be too tight, but will it soon
become so by the increase of swelling and
thus impede the return of the blood and
the usual consequences of such constric-
tion. When splints are applied the ex-
tending force should be exerted on the
extremities of the limb and not alone
on the neighborhood of the injury. The
apparatus employed should be such
that the limb can be examined fre-
quently without disturbing the fragments

in order that the states of the soft parts may be ascertained because fatal accidents are liable to result from the want of proper attention. But if the dressing consists of a bandage applied directly to the limb although many distressing consequences may result, yet the fear of producing distraction of the fragments will be sufficient to deter the young surgeon from examining the injury. The limb should be placed in such a posture as to give no uneasiness and remove the necessity of the muscles constantly contracting and pulling to relieve themselves from pain which tends materially to the displacement of the fragments. The next indication to be met is to produce extension without causing any great amount of pressure. Various apparatus has been employed

by different surgeons which must the indications for treatment be a greater or less; but the most important thing in the adaptation of any instrument is to comply with the teachings of nature, and the surgeon's own judgement should be clearly and rationally employed in all cases.

I have in this essay endeavored to state plainly and accurately the causes of fracture acute and immediate, the mode in which separation takes place, the signs for diagnosing the various forms of fracture and the indications to be observed in the treatment of such injuries.

An

Inaugural Dissertation

on

The Physical Examination of the Heart

Submitted to the Examination of the

Provost Regents & Faculty of Physic of the

University of Maryland for the

Degree of Doctor of Medicine.

by J. T. Thiselin of Md

To
Dr Chew
As an humble mark
of high esteem.
A Pupil

Physical Examination of the Heart.

Diseases of the heart, however complex, and seemingly mysterious they were, have within a comparatively recent period, been unravelled by the zealous seekers of knowledge, and lovers of humanity. It was formerly supposed, that heart diseases were of rare occurrence, and when recognised, which was only in a very advanced period, they were beyond the reach of remedies. To prove how ignorant our predecessors were, in regard to such maladies, it will be only necessary to state, what Dr Blendinning has reported of his dissections; out of five hundred, one third presented signs of diseased heart. Statistics, equally convincing as the above, could be cited, as time, and patience, are the only necessary requisites, to furnish them. When we take into consideration, what discoveries have been made of late, in the mode of detecting such diseases, masked, as they generally are by secondary symptoms, which to them, were decidedly more prominent than the primary, little censure can be attached to our worthy sires, for treating hydrothorax, ascites, or idiopathic disorders, when they were in reality the effects of a morbid

state, existing elsewhere. Before entering upon the subject, which I fear, I have had the misfortune to select, not that I consider it trite, and unworthy of any great degree of attention; but because of the limited knowledge of the intricate labyrinths through which I have to travel, it will be necessary to give a sketch of the course which will be pursued, in the investigation of my subject. Every writer on the diseases, incident to the heart, & lungs, make certain arbitrary divisions of the thorax, for the twofold purpose of facilitating labours, and preventing the confusion which would ensue, if some such expedient, was not adopted. The division, which will be followed here, is one proposed, by a recent writer, on pulmonary, and cardiac affections.

The chest, is divided into anterior, lateral, & posterior, regions. The anterior, are called: supra-clavicular clavicular, infra-clavicular, mammary, infra-mammary, supra-sternal, upper sternal, and lower sternal. The lateral regions, are; the axillary, the infra axillary. The posterior series, comprises; the upper scapular, the lower scapular, infra-scapular, and intra-scapular. Of these regions, the supra,

upper, and lower sternal, are single; all the rest are double. Boundaries of these regions. Supra clavicular. Above, a line drawn from the outer part of the clavicle, to the upper ring of the trachea; below, the clavicle; inside, the edge of the trachea. Clavicular. corresponds in its outline, to the inner half of the clavicle. Infra clavicular. Above, the clavicle; below, the lower border of the third rib; outside, a line falling vertically from the acromial angle; inside, the edge of the sternum. Mammary. Above, the lower border of the third rib; below, the sixth rib; outside, a vertical line, continuous with the outer border of the infra clavicular region; inside, the edge of the sternum. Infra mammary. Above, a line slanting outwards from the sixth cartilage; below, a curved line corresponding to the edges of the false ribs; outside, the outer edge of the mammary region prolonged; inside, the sternum at its inferior angle. Supra sternal. A small region, more or less hollow, bounded below, by the notch of the sternum, and laterally by the sterno-mastoid muscles. Upper sternal. Corresponds to that portion of the sternum lying above

the lower border of the third rib. Lower sternal. Includes the remainder of the sternum. Axillary. Extending from the point of the axilla above, to a line continuous with the lower border of the mammary region below; and in front, from the posterior border of the infraclavicular, and mammary regions, to the external edge of the scapula behind. Infra-axillary. Bounded above, by the axillary region; anteriorly, by the infra-mammary; posteriorly by the infrascapular; and below, by the edges of the false ribs. Upper, and lower scapular regions, have the same boundaries as the fossæ of the scapula. Infrascapular. Above, the inferior angle of the scapula, and the seventh dorsal vertebra; below, the twelfth rib; outside, the posterior edge of the infra-axillary region; inside, the spine. Infra-scapular. Occupies the space lying between the inner edge of the scapula, and the spines of the dorsal vertebræ, from the second to the sixth.

In the above description, of the different regions of the thorax, the contents of each division, have been left unmentioned, because an enumeration, would subsequently lead to repetition, which it is my intention

if possible to avoid. I will not digress from the consideration of my subject, further than by making some remarks, in reference to the locality of the valves of the heart, aorta, and pulmonary arteries. The aortic valves, are situated beneath the sternum, opposite the lower edge of the cartilages of the third ribs; those of the pulmonary artery lie to the left, and about half an inch above. When examined in the dead body, the normal situation of the valves of the heart, is as follows; the tricuspid valve extends obliquely downwards, from a point in the middle of the sternum, immediately below the insertion of the cartilage of the third rib, to the right edge of the sternum, at the lower margin of the cartilage of the fifth rib; the mitral valve, also placed obliquely; extends, from the junction of the left third rib with its cartilage, down to the insertion of the cartilage of the fourth rib, into the left margin of the sternum.

The physical means of exploring the heart, may be resolved into five classes, inspection, palpation, mensuration, percussion and auscultation.

These classes, I shall again divide, into several sub-classes, which will be described under the class, to which they, respectively belong. The physiological conditions, and pathological changes, which give rise to the different abnormal sounds, will also be noticed.

The first class in order, inspection, has for its object, the investigation of the outward appearance, of a diseased body, compared with a standard one in health. By inspection we ascertain the shape of the cardiac region, the condition of the integuments, and the visible impulse of the heart.

In health. The præcordial region, is slightly more convex than the opposite side, which is denied by some, though it appears to me it should be an inevitable consequence in all cases, excepting, peculiarities of conformation. There is no perceptible difference in the integuments of the two sides. The impulse, is visible between the fifth and sixth ribs, and the area of its impulse, does not exceed a square inch. Physiological conditions, and accidental causes, produce a variation in the impulse in nearly every person. Thus, different postures, either

elevate or depress the apex, according to their variation: inspiration lowers, and expiration elevates it. A full meal, flatulent distention of the stomach, and pregnancy, elevate and throw the apex to the left. Thin persons, and those of the nervous temperament, have the area of impulse increased.

In disease. Hydro-pericardium, agglutination of the pericardium to the sternum, produce bulging of the intercostal spaces, and ribs; and it is stated that hypertrophy, causes greater curvature of the ribs, and widens the intercostal spaces, without elevating them; a variety in diagnosis not often observed. Depression is sometimes noticed, when serous effusions are undergoing absorption. The integuments of the cardiac region, in occasional cases of hydro-pericardium, merging into the chronic form, may be observed to be more edematous than other parts of the chest. The situation, extent of the impulse, may be modified by causes, resident in the heart, or existing elsewhere. Tumours situated in the mediastinum, will increase the extent of the impulse, whether they are anterior, or posterior.

Emphysema diminishes the pulsation of the left lung, increases the impulse; and hypertrophy, aneurism of the aorta, or pulmonary artery, and the debility of any disease, sufficient to affect relaxation of the great vessels of the heart, will produce depression of the apex beat. Diminution of the size of the heart's cavities, consequent upon enormous loss of blood, effusions into the pericardium, and enlarged liver, raise the apex. Certain undulatory motions are described as occurring, in some few cases of pericardial effusions.

Palpation, the art of applying the hand, for the purpose of ascertaining the condition of internal parts, has reference, to the vocal thrill, impulse, and mobility of the precordial ribs.

In health. The vocal thrill gradually diminishes, from the circumference of the cardiac region, until the part uncovered by the lung is reached, where it is totally absent. Impulse, has been fully discussed under another head, and it only remains for me, to say something about its mechanism.

Various explanations, have been given of the cause of the impulse, some writers referring it to the systole, others to the diastole, of the heart. Dr Hope says, that during the systole of the ventricles, the apex is drawn towards the base, and is at the same time tilted forwards. It is said, that the anterior fibres of the ventricles are of greater length, than the posterior, and during the common contraction, the heart is elongated from base, to apex. This explanation is now generally received, but more experiments appear necessary to prove, that it is a uniform result. Dr Stitt, ascribes the mechanism of the movement, to the diastole of the ventricles, and says it is difficult to comprehend, how a hollow muscle by contracting, could give a blow to an exterior body. When he says, the heart of a frog which is transparent is examined, the projection of the apex, is found to coincide with the diastole, and its retraction, with the systole of the ventricles. It may be inferred from such conflicting explanations, that the mechanism of the cardiac impulse, is still involved in much obscurity, but the weight of authority, is in favour of its systolic origin.

The motion of the ribs in the left mammary region does not differ materially from the opposite side.

In disease. The vocal thrill, as increased in induration of the left lung; hypertrophy, and pericardial effusion, diminish it to the right of the sternum.

Application of the hand detects two kinds of phenomena; one a vascular thrill, or purring tremor, produced by the forcible, and rapid propulsion of blood through orifices, narrowed, and roughened, by disease; the other, pericardial friction, occurring in the first stage of pericarditis.

There is another cause of this friction thrill, which ought to be remembered in diagnosis, the rubbing of the heart against an enlarged, and tuberculated liver. Impulse is weakened by emphysema, and hypertrophy of the lung, debility, fatty degeneration of the heart, and deposition of fat beneath the pericardium. Certain diseases of the brain, spinal cord, and medicinal substances; as aconite, digitalis, and hydrocyanic acid, also diminish the force of the impulse. Inflammation of the heart, especially if combined with pericardial adhesion, increases the area, and strength of the beat; so

also, does hypertrophy with dilatation. Hydro-pericardium produces bulging of the ribs, and intercostal spaces; hypertrophy elevates the ribs, and widens, without throwing outwards the interspaces.

Mensuration, the least important of the physical signs, teaches us little. In health, the nipples are equidistant from the sternum; in disease, they approach or diverge from each other, according to the nature, and amount of the affection.

Percussion was first practised by Avenbrugger, about the year 1671, but it was not until Skoda's work appeared, that the profession could appreciate its value. Two divisions of percussion are usually made, mediate, and immediate; the former is generally preferred. Of almost every description of mediate percussion, plessimeters of various kinds are mentioned, the one most convenient, and at present in general use, is the index finger of the left hand. To be successful in percussing the heart, the patient should be placed in the recumbent posture, and not the slightest movement, should be permitted during the examination.

The force used in striking, will vary from the gentlest touch, to a sharp tap. Percussion of that portion of the cardiac region, uncovered by the lung, will yield a short dull sound, & the resistance of the parietes, will be quite manifest. The limits of the heart in calm respiration are as follows; on the right, a vertical line extending at mid-sternum, from the level of the fourth rib, to that of the sixth; on the left, an oblique line, tapering outwards and downwards from the latter, opposite the fourth cartilage, & curving inwards again to the sixth rib, beside the heart's apex: inferiorly, a line sloping to the left; from the central point of the lower edge of the sternum along the sixth cartilage.

In disease, percussion is modified by numerous conditions, existing in the thorax and abdomen. Emphysema, pneumothorax, and great gastric flatulence, counteract the dulness: pleuritic effusion, hepatization of the left lung, tumours of different kinds, overloaded stomach, and enlargement of the left lobe of the liver, increase it. The affections of the heart, which increase the extent of dulness are

hypertrophy, accumulation of fluid in the pericardium, the effused fibrin of pericarditis; those which diminish it are, pneumopericardium, and atrophy. The only two abnormal conditions of the heart, in which any great degree of confidence can be placed in the revelations of percussion are, enlargement of the heart, & effusion into the pericardium; in these also, it possesses value except in connexion with the developments of the other physical signs.

Cardiac auscultation signifies, the investigation of the diseases to which the heart is subject, through the mediate, or immediate application of the ear.

The two grand elements of auscultation are, acuteness in hearing, and a nicety in discriminating, the occult workings of nature in health, and disease.

The extent of space, over which the heart may be heard to beat, will be increased, or diminished, in proportion to the thinness, or thickness, of its walls.

It is important to recollect, that the cardiac pulsation may be heard, far beyond its natural limits even when it is perfectly healthy, in consequence of the lung, between

the ear, and the heart being solidified: which may have resulted from hepatization, or the presence of a number of crude tubercles. Pleuritic effusion, will also convey the sound of the heart's action to a distance. The heart is heard more distinctly, and over a space which is comparatively larger in children, than in adult persons; and it may be heard over a wider extent of the chest, whenever its action is augmented by exercise, by emotion of mind, or by febrile excitement.

With every pulsation of the heart there are two sounds, one immediately following the other, and succeeded by a short interval of silence. The first or systolic sound, is heard during the contraction of the ventricles, and is synchronous with the beat of the heart, but antecedes by an almost inappreciable interval the pulsation of the radial artery. The second or diastolic sound, takes place at the instant when the heart reverts to the dilated condition, in which it had been prior to the systolic movement. The quality, and duration, of the two sounds do not agree. The first is longer, duller, than the second; and is heard in that part of the left mammary region,

where the ventricles are most superficial. The second is quicker, shorter & clearer, than the preceding, and is compared by Dr Hope, to the sound produced by lightly tapping with the soft extremity of the finger of one hand, near the ear, the knuckle of a bent finger of the other hand. It is heard most distinctly over the site of the semilunar valves.

The duration of each sound, and the period of repose, have been variously assigned. Dr Williams divides the whole period, from the beginning of one pulsation, to the beginning of the next, into five equal parts: and allots two of these to the first sound, one to the second, & the remaining two to the interval of silence. Opinions have differed greatly as to the physical causes of these natural sounds. The systolic sound though complex, the theory of its production last proposed, is now generally received. One source, is the contraction of the ventricles; the other, the closing of the auriculo ventricular valves; and in addition to these sources, the contraction of the auricles, must be taken into account. The essential cause of the systolic sound, appears to be due to muscular contraction from the fact, that when a heart is taken from a living thorax, and placed upon a

table, its contractions, which persist for an hour, are still attended with a noise, similar to the natural first sound, though weaker. A thin ventricle will yield a louder sound than a thick one: because, where there are many fibres, they choke and muffle each others vibrations. This variation from compactness of fibres, is explained by Dr Williams thus; if we observe the different sounds, produced on tightning thin silk, or thick cloth, we find that the thinness of the silk, gives a unity, & briefness, to the impulse which it receives, & the sound is short, & loud; whilst in the cloth, the impulse is divided, & prolonged, in the complexity of the fibres, & the sound is dull, & less brief; so, under similar circumstances, a thin ventricle will give a louder, & sharper sound, than a thick one. The second or diastolic sound, is more simple, as there is only one tenable mode of accounting for it; the shutting of the semilunar valves by the receiling blood. That such is the correct theory for explaining the second sound, is proved by the simple experiment, of preventing the sigmoid valves from unfolding by hooks, which converts the clacking sound into a hiss. The various causes which modify the sound in health have

been previously mentioned. There are two non-cardiac causes of bellows murmur, which should be mentioned before proceeding further; anæmia, & pressure of an enlarged heart, upon the bronchial tubes. To diagnose that occurring in the first, from true cardiac murmur; there are two things to guide us, the general condition of the patient, & the fact of being able to detect it in the large veins of the neck. In the second case, all that is necessary is to direct the patient to suspend his breath.

If during the first stage of pericarditis, the stethoscope be placed over the heart, we will detect what has been denominated friction sound; should it be feeble, forcible pressure with the stethoscope will increase its activity. When inflammation of the pericardium, eventuates in effusion of serum, a churning, or washing sound, is sometimes audible. These sounds are more superficial than those pertaining to the heart itself. In order to give each morbid sound of the heart a due amount of investigation, it will be perhaps best to speak of the changes, which occur in the individual valves;

and the deviation from natural sound, resulting from such changes. The pathological alterations, which take place in the valves; are produced by depositions of lymph, excrescences of various kinds, osseous, or cartilaginous productions. The valves of the left side of the heart, are said to be more obnoxious to disease, than those of the right. First, in relation to the aortic valve; if it be obstructed, the murmur will be heard during the systole, will be rather loud, resembling according to Dr Hope, the whispered letter z, and will follow the course of the aorta, sometimes even as high as the carotid, without being perceived, or faintly so over the ventricle. If there be such insufficiency of the valve, as to occasion regurgitation from the aorta, the murmur will be heard during the diastole, will be of a lower key than the preceding, resembling the word awe, whispered in inspiration: and will be heard over the ventricle, into which the regurgitating current from the aorta is directed, though it may also be heard for some distance up the aorta.

Secondly, in relation to the mitral valve, obstruction is

indicated by a diastolic murmur, heard over the left ventricle, very feeble & low toned, in consequence of the weakness of the auricular contraction, and the depth of the valve, and compared to the word who, uttered feebly.

Thirdly, the same rules are applicable to the murmurs of the pulmonary, semilunar, and tricuspid valves.

We may sum up in conclusion, that any change, which takes place either in the blood, or heart, thereby altering the due relation between the cavities of the heart, and the circulating fluid, will generate that murmur, which to the physician, is the death knell of his patient, or the index of an affection amenable to treatment.

J. T. Ghiselin

An

Inaugural Essay

On

The Circulation of the Blood,

Submitted for the Examination

Of the Provost, Regents, & Faculty of Physic

Of

The University of Maryland,

For

The Degree of Doctor in Medicine

By Augustine Walsh Emory

Baltimore

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The circulation of the blood constitutes one of three functions, the uninterrupted performance of which is necessary to the continued organic or vegetative life. Respiration, Circulation and Circulation may be regarded conjointly as the functional Unity upon which vitality immediately depends. Something analagous to circulation is therefore to be traced more or less evidently throughout the whole scale of organic life. It may be urged in contradiction that in the lowest of animals no circulation can be detected. This is true if we attempt to institute a comparison between them and the highest orders where this function is perfectly performed. Still there is no reason to believe that the necessity for a circulation is

ous entirely superceded by any other contrivance on the part of nature. In the order of Radiata, the digestive Cavity occupies nearly the whole extent of the animal. The nutritive material is thus brought in contact with nearly all parts of the system, and a circulation in a great degree rendered unnecessary.

Hence in the lowest group of the Animal Kingdom there is but little provision made for the maintenance of a circulation. Still even in this group which exhibits so little of animal life as to be scarcely distinguished from the vegetable, a system of vessels in the Star fish for example may be distinctly recognised, and these can have no other office but that of the conveyance of a nutritive fluid. The degree of perfection with which this function is maintained also bears a relation to the activity or the contrary with which the respiration of the animal is carried on. Whereas in insects aeration of the blood is effected not by especial organs like

the lungs but by the accession of the air throughout their whole structure the circulation is but sensibly maintained. It may be safely inferred from comparative anatomy that this function is of all others the most important. In plants where no organs for respiration or digestion are evident a very complete system of vessels are present for the purpose of keeping up a circulation of the sap, which is in vegetables the nutritive material.

This function is performed in plants with a great degree of regularity and precision. The nutritive fluid or sap is first taken into the roots through the intervention of long delicate filaments, which ramify themselves in every direction. These filaments may be compared to the lacteals & intestinal absorbents of the human body, which take up the chyle from the digestive organs and carry it into the general circulation. From these the sap is conveyed in a set of vessels formed from them being arranged around the pith

medulla of the Stem, Central. These vessels present the appearance of slender fibres, and are more or less interlaced and wound spirally about each other. Within these tubes the Sap may be seen ascending probably facilitated, in its upward movement by the spiral arrangement just mentioned.

By means of the numerous modifications and anastomoses of these Central vessels, it is distributed to the various branches and smaller twigs and finally to the Leaves, Flowers, or Fruit, as the case may be. It circulates regularly in the Leaves and it is there exposed to the influence of the light, heat and air, by which some Chemical or other change is doubtless effected in it. The Leaves therefore perform the office of Lungs to the plant. The Sap however is subjected, in addition to the influence of the atmosphere, to heat of light, which also seems necessary to its perfection & elaboration. From the Leaves the Sap is returned, descending by another set of vessels, which may be distinguished by

system of the animal. These vessels or vegetable arteries are contained within the bark. It is in these the nutritive function is effected by the deposition of material between the bark and inner-wood. This is an imperfect account of the circulation in annual plants whose stems are yearly renewed —

The arrangement is somewhat different in trees and shrubs. There exists in these last no central vessels to do this office, it is effected by tubes situated in the external layer of vigorous matter termed the alburnum. This is always the growth of the preceding years and performs the office of sustaining the vessels for one season only, being subsequently surrounded & enclosed by a new layer of the same kind. The roots of trees are consequently made up of successive layers, superimposed one upon another, and which are each in their turn filled the purpose of conveying the sap to the leaves and branches. From these leaves and branches the sap again descends

through the vessels of the inner bark beneath the yearly
ring, in the annual plants, and there depositing the
new layer for the next year. This bark also performs
this office for one year only, and is then cast off
its place supplied by a new layer formed
in the inside between it and the albarnum.

This is the reason of the quantities of thick
and dead bark often accumulated upon the
trunks and limbs of large trees. There are many
other points connected with the vegetable
circulation, which deserve notice. It is highly
probable however that if more were known
concerning the Anatomical structure of plants
still greater analogies would be seen as existing
between them and the Animal Kingdom —
The purposes accomplished by this function are
in the human economy, twofold. First it is instrumental
in bringing to the several tissues the materials by
which they are to be nourished, as well as the
requisite necessary for the maintenance of the temperature

Secondly by its agency the effete matters rejected for nutritive purposes are brought within the reach of the Organs of excretion. To accomplish these ends the blood is kept in continuous movement, and is at times exposed to the action of the air in the lungs, that it may receive Oxygen and throw off the Carbonic Acid and water which constitutes the chief excretory substance. The blood then which has aerated the system thus completing the systemic or greater circulation has substituted to be Oxygenated, in the lungs, during its and through which it performs the pulmonic or lesser Circulation

To maintain these separate circulations so long the Heart having two distinct Compartments, a right and a left having no immediate inter-communication in the adult state.

The right side receiving the blood from the veins, and transmitting it through the lungs and the left receiving it from the lungs and transmitting it

through the system. Each of the sides of the heart has its own set of vessels connected with it, a system of veins terminating in the Right Auricle and a system of Arteries taking their origin from the left ventricle. These of course communicate at their extremities by means of a third set of vessels the Capillaries. The course the blood traverses through the vessels is often compared to the figure 8 the heart being situated at the centre of the figure.

There are two complete sets of vessels emanating from it superiorly and inferiorly. The veins are usually termed afferent, and the Arteries efferent vessels. In describing the course of the circulation it is a matter of indifference where we commence. If we suppose the blood collected in the Right Auricle, we shall have this Auricle contracting & propelling the blood through the Right Auriculo-ventricular opening into the Right ventricle. During the Auricular Systole or contraction regurgitation might take place

into the Vena Cava more it is prevented by a
Valvular arrangement situated near the Orifice
of these Vessels. The blood is then subjected
to the Contraction of the Right Ventricle the Carnae
Columnae of which Contracting draw through
the Chordae Tendinae draw down the Bicuspid
Valves and thus prevent Regress through the
Auricula-Ventricular Orifice. As in the adult
state there is no Communication existing between
the Right and Left Side of the heart the blood when
Contracted upon in the Ventricle has but one
alternative and that is to Rush through the Orifice
of the Pulmonary Artery. The Current forces back
the Semilunar Valves situated at the Commencement
of this Artery, and, distending the walls of the
Artery and getting behind these Valves forces
them down closing the Orifice. The blood is
now conveyed by the Pulmonary Arteries to the
Lungs, And after circulating through the innumerable
Ramifications it is returned by the Pulmonary

veins to the left Auricle, whence it passes into the left ventricle and thence into the Aorta in like manner to that described on the right side.
After descending through the System it is of course again returned to the right Auricle to go over the same course.
The blood on the right side of the heart is venous of course and charged with Carbonic Acid which is got rid of in the lungs. It receives during its circulation in the Pulmonary Arteries a large supply of the Oxygen of Respiration, and is transmitted through the System thus supplied until it arrives in the Systemic Capillaries. In these vessels a large portion of the Oxygen is lost in combining with the refuse matters of the tissues.
All the organs concerned in the circulation assist more or less in maintaining the constant movement of the blood through them.
The heart by the vigorous muscular contractions furnishes the chief motive power, the Arteries also by means of their elastic walls assist considerably

in the propulsion whilst the veins although surrounded with contractility still possess sufficient elasticity to prevent distension by any force of the blood, and thus contributes to its continued movement. They also assist by means of the valves with which they are furnished. The part which the Capillaries perform is less obvious, there is sufficient reason known to believe that they do exert an influence upon the motions known of the blood within them- of this more hereafter. The Heart.

This Organ being provided with two distinct sets of cavities, the performance of its functions consists in the alternate contractions of the muscular Parieties of the Cavities. The contractions are made in accordance with a peculiar Rythm which consists in the simultaneous contractions of the Auricle on the one hand, alternating with the simultaneous contractions of the Ventricle on the other. The dilatations of both sets of Cavities are also simultaneously accomplished. The contractions

& Systole, as has been remarked of the Ventricles alternates with those of the Auricles, or in other words, during the dilatation or diastole of one pair of Cavities, the other pair are contracting—
That this is the case has been established beyond a doubt. The only question which seems to admit of a doubt being as to whether the actions are performed uninterruptedly without any interval of rest. Observations lately made go to prove that a slight cessation or period of repose does occur, though of so brief a nature as to require very nice, discriminating powers well matured by practice to detect—
If we commence an examination of the heart's action at a period slightly antecedent to its beat against the Chest, we shall find the Organ in a passive state, that is the Auricles having just contracted are becoming filled with blood from the Veins; whilst the Ventricles are not yet fully distended. The contractions

of the Auricles which quickly occurs completes their distension and is of course quickly follow by the Ventricular Systole. Or perspicuously the Ventricular diastole may be divided into two stages the first one of partial dilatation immediately preceeding the Contraction and the second one immediately succeeding & Each accomplished by the Auricular Contractions.
Now between these two stages the period of rest is to be observed. This period of repose of course precedes by a brief interval corresponding to the second stage of dilatation, the beat of the heart, and by a somewhat longer interval the pulse in the Radial Artery. Both of which are the result of Ventricular Contraction.
The contractions of the Auricles are accomplished quickly whilst that of the Ventricles are on the contrary prolonged. The Carnae Columnae of the Cavities contract in a longitudinal direction thus greatly reducing the vertical

diameter of the ventricle and causing it to assume a globular form. The arrangement of the valves is the same on both sides of the heart. The bicuspid valves on the right side however do not close as completely as the mitral, the former even admit of a slight regurgitation under certain circumstances. This apparent imperfection is in reality a providential arrangement for it not unfrequently happens from disease of the lungs or from ordinary causes such as muscular effort or cold an accumulation of blood in the lungs takes place. In these cases did not these valves admit of a slight regurgitation a condition of great danger would happen, the ventricle would become distended to such a degree as to result in Emphysema or paralysis of the Organ. This arrangement may therefore, not unappropriately be termed the safety valve action of the heart. The action of the heart gives rise to two distinct sounds audible

when the ear is applied to the chest. The first sound is synchronous with the beat of the heart; this is succeeded by the arterial pulse and then follows almost immediately the second sound, and then a slight pause. We may for convenience, divide the time which elapses between one beat of the heart and the next into four parts. The relative time occupied in each of the above actions is as follows. The first sound occupies two of the four divisions, the second sound a third, and the fourth part corresponds with the pause.

The first sound is protracted and dull whilst the second on the contrary is brief and sharply sudden following quickly the pulse. The first sound corresponds as has been mentioned with the impulse of the heart and with the pulse in the larger arteries. Its occurence with these events shows conclusively that it is the result of ventricular action. The

events which occur at the same moment with the first sound are systole of the ventricles and closure of the tricuspid and mitral valves on the one hand, and opening of the arterial valves and the rush of the blood into the arteries on the other. Any one or all of these may therefore contribute to its formation.
This sound has been attributed to many and opposite causes. It has been contended by one set of observers that this sound of the heart is entirely due to the percussion of its apex against the side of the chest.
This view is undoubtedly founded on truth, although it would appear to be too exclusive in its nature. There can be no doubt that the beat of the heart contributes to the formation of the first sound as when the impulse is prevented the sound is diminished in degree.
But on the contrary this sound can be distinctly heard when the organ under gen contraction exterior to the body.

Others have assigned as its cause the sudden tightening and closure of the Auriculo-ventricular valves & the contact of the blood with the rugous walls of the ventricle. Whilst others assert that the first sound of the heart is consequent upon the rush of the blood through the Arterial orifices.

These all, doubtless contribute more or less to its production they are but secondary however as most of them may be interfered with without a material change in the sound.

It must be regarded therefore as the result of a primary and more efficient cause, & which is to be found in the contraction of the muscular fibres composing the ventricular walls.

It has been ascertained by observation that the contraction of the other muscles is attended by sound. And it is consequently not unreasonable to suppose the contractions of a highly developed muscle like the heart to be instrumental in the production of a sound proportionate in distinct

ness and loudness to the region of these contractions. The Auriculo-Ventricular valves may be regarded as rendering the sound clearer by the degree of vibratory tenseness in which they are thrown. They it has been happily remarked act as "sounding boards" in increasing and adding to the sound produced by forcible contractions of the fibres of the ventricle. They may originate a certain amount of sound by being suddenly flapped over the orifices. According to an experiment of Valentin this would appear probable. A portion of a horse's intestine was partially filled with water the air being carefully excluded more water was then forced in by means of a syringe fitted accurately to one end of the intestine and a sound analogous to the one in question resulted. The second sound may be looked upon as the result of the sudden closure of the semilunar valves, situated at the commencement of the Pulmonary Artery and Aorta. This is the true cause, appears from the experiment

in which these valves have been fastened to the walls of the Artery by means of a delicate needle passed through them, thus preventing their closure. This operation resulted in the complete prevention of any Second Sound Disease of the valves tend to produce the same result -

The Pulse - The contractions of the heart are performed with varying frequency, being influenced in this respect by a number of circumstances. The principal causes which are influential in causing a difference in the pulse are muscular exertion, sex, temperament, mental emotion digestion, period of the day -

The pulse is usually more frequent in a standing than in a sitting posture, and this is solely owing to the greater amount of muscular exertion required to preserve the body erect. When this position is maintained by artificial supports, which supersede the necessity of muscular action no increase is observable in the pulse. Digestion exerts a

manifest influence upon the frequency of the hearts action, which is usually increased after a meal. Mental excitement is most commonly attended by an acceleration of the pulse. Difference arising from sex are very manifest - the pulse of the adult female exceeds that of the male by ten or fourteen beats in the minute.

Disease of course produces a manifest effect upon the hearts action. This varies according to the nature and intensity of the affection, whether merely functional or organic, the study of these changes belongs however rather to the domain of Pathology, than to that of Physiology.

The relative size of the different cavities of the heart, deserve mention, but opinions are various in regard to this point. The capacity of the ventricles is regarded as equal, they will each contain as an average measurement about three ounces. The auricles are of less capacity and their walls not so thick as those of the ventricle. The muscular

fibres of the left ventricle are more numerous and its walls consequently much thicker than those of the right. This is necessary on account of the greater force in the propulsion of the blood through the system to be overcome by its contractions.

It has been an interesting matter with Physiologists to determine the cause of the peculiar Rythmic movement of the heart. After all but little is truly of acceptance is known or advanced, and all that can be accomplished in an elementary treatise like the present one is to furnish a brief summary of the views entertained and thus show some degree of industry where originality is impossible...

The heart is largely endowed with a property which may be termed irritability. That is the organ by virtue of this property under the slightest excitement is capable of undergoing a series of alternate contractions and dilatations.

The question then presents itself on inspecting

the cause and nature of this irritability.
The blood according to some acts as a vital stimulus and by its continued contact with the endocardial lining membrane stimulates the organ to contract.
Experiments tend however greatly to invalidate this doctrine. The heart of the warm blooded animal should of this view be correct be more largely endowed with vitality. But observation tends to show the contrary, the heart of a cold blooded animal when removed from the body will continue to pulsate much longer than that of a human being, and of course in this instance the stimulus of the blood is entirely wanting. Hence the contact of the blood can have no essential influence upon the action of the organ. In the case just mentioned some have supposed that the air itself may act as a stimulus. This would at first appear plausible but here again experiment has overthrown hypotheses. Dr. Reid observed the heart of the frog (an animal quite unfortunate in being the subject of numerous singular experiments) when excised

to pulsate equally well in the vacuum of an air pump as in the air, and where of course the contact of the air could have nothing to do with it -

Dr. Alison reasons from the peculiar arrangement of the muscular fibre being interlaced & interwoven, supposes that the Rythm of the Organ is to be entirely attributed to this disposition of the fibres - one set of which according to him in contracting acts upon and irritates another which in like manner contracting an alternate series of actions are kept up -

A very pretty and ingenious theory but seemingly inadequate to explain the matter in question -

The contractions of the valvular arranged fibres at the orifice of the vena-cava is a regular occurrence but no interlacement is observed in them -

Others have regarded the contraction of the ventricle as the necessary sequence of that of the Auricle -

This view would appear to be sustained by the fact that when the irritability of the Organ is almost exhausted contractions in the Auricle are some-

times followed by the ventricular systole.
It is often observed however that the movements of the ventricle particularly on the left side come before those of the Auricle do. And now conclusive this that this set of movements continue when the Auricle and ventricle are entirely separated.
Besides these two, new unanswerable objections the logic of the theory, is manifestly erroneous.
The object is to explain the rhythmic actions of the heart.
But we are furnished with only a partial solution of this problem we are told literally that one portion of the heart influences another to contract, & that one action gives rise to another in the same organ, & in other words that the organ moves itself.
A view which is quite unworthy of common sense to say nothing of science.
The intimate connection of the heart with the cerebro-spinal nervous system has afforded ground for belief in the dependency of the organ entirely on nervous influence for its actions. Physiology

of nerve force is undoubtedly transmitted to the heart, but in what this manifests itself, it is difficult if not impossible to determine. That the contractility of the heart is not due to its nerves is implied in those cases of monsters born perfectly anencephalous, destitute of these centres, but having a full maintained circulation. The only view which seems at all adequate to account for the rhythmic actions of the heart, is the one entertained by Lee, Volkmann and Remack and others.

These observers suppose it dependent upon the minute ganglia connected by nerve fibre and which are so immediately distributed through out the substance of the Organ. They constitute a special nervous system, the ganglia acting as centres originating nerve force for the movements of the heart, and then connecting nerve fibre acting as messengers for the equalization and concentration of this force. There are numerous facts which tend to sustain and corroborate this

view some of which have been already mentioned. The independent action of each portion of the organ when separated from the rest and from the body, is easily explicable upon this view - these ganglia being equally distributed and having equal influence.

The Arteries. These elastic tubes are second only to the heart as organs for maintaining the circulation. The walls of an Artery are made up of four distinct coats, an external, an elastic a muscular and an internal coat. Besides these there is the Epithelial lining a proper structure in itself. The only coats which are Physiologically important as influencing the circulation are the elastic and muscular coats - The former tunic is composed of yellow elastic fibres (tissue jaune). Formerly these two coats, the muscular and elastic were undistinguishable but the inner one consisting of circular pale fibres is regarded as distinctly muscular. The elastic tissue is found most largely developed

in the larger Arteries, whilst the Muscular is most evident in the smaller branches. The Arteries moreover which are going to parts the supply of blood in which greatly varies, are largely endowed with muscularity. The belief in the muscularity of Arteries depends upon the following observations.

1st They may be made to contract by the application of Cold, by the Mechanical or Chemical irritants, and by electricity or Galvanism. More elasticity could not effect this, as after death when the vital irritability has been exhausted no such thing occurs.

2d The effect of cold upon the arteries has been carried to such an extent, as to cause temporary cessation of their action, and this particularly in the smaller vessels which have the most muscular fibres.

3d When an Artery is severed completely the end retracts and contracts often to such an extent as to completely close their orifices. The contractility may also be increased by mechanically irritating

the cut extremities which would not be the result if they possessed only the property of elasticity.

4" In animals bled to death, the calibre of the artery has been found by Mr. Hunter and others permanently reduced. This continues for sometime after death, as long as two days and of course cannot depend upon elasticity. That this vital contractility is identical with that property as exhibited by organic muscle appears from the following facts. First the arterial fibres are identical in composition chemical and structural with muscle.

Secondly these fibres as previously remarked contract when mechanically irritated, or on the application of cold. Thirdly these fibres exhibit the rigor mortis and are stimulated to contract by electricity. And lastly they at times undergo a greater diametrical reduction than mere elasticity could effect and are dilated to a degree beyond any elastic structure. As regards the use of the muscular coat of the arteries that assigned by most

Physiologists viz. of regulating the quantity of blood sent to each part, seems the most consistent with truth. The different organs according as they are in a state of great activity or the contrary require varying amounts of blood. Now the heart can have no influence in governing the supply. But the Arteries by virtue of their power of actively contracting so as to diminish, and of dilating, so as to increase the stream sent through them can easily proportion the supply to the demand. This contractility is moreover of signal advantage, in event of an artery being wounded by its retraction and contraction, it at first diminishes the loss of blood, and finally giving time for a coagulum to be formed stops it entirely. The office of the Arteries may be summed up as follows. 1st To furnish permeable conduits for the distribution of the blood to the several tissues and parts. 2d To determine the amount sent to any particular part. 3d By virtue of their elastic coat to effect the equalization of the currents and to

convert the pulsatile or jetting movement caused by the ventricle into an equable and steady movement.

The Capillaries. It has already been stated both Arteries and Veins terminate in a distinct set of vessels termed from their size Capillaries (Capillus a hair). These little vessels by their numerous anastomoses form a complete microscopic network, which completes the integrity of the Great circle of vessels beginning at the heart. These vessels become perceptible by passing an injection of coloured fluid through the Arteries, this injection will pass into the Veins. In the web of the frog's foot or any similar structure these minute canals may be detected by the aid of high magnifying powers. The precise point of departure at which they leave the Arteries on the one hand & communicate with the Veins on the other, can not be easily defined. Opinions differ as to their diameter. Muller gives [illegible] to [illegible] of an inch; perhaps [illegible] may be considered as their average diameter. The calibre of these tubes varies according to the

tissue in which they are situated. In the brain they are quite small whilst on the contrary in the Medullary Structure of bone they are very large. In the liver the intervening spaces are said to be smaller than the vessels themselves. Their size varies at different times, they are susceptible of considerable dilation as well as contraction. Some have supposed the capillaries to be mere canals or conduits channelled out in the tissues, such however is not the case. They are distinct tubes having membranous parietes, homogeneous in character, and perfectly transparent.

Observation has shown that these vessels originate in the primordial cells, these cells by assuming a columnar arrangement adhering end to end, and becoming greatly elongated the partitions between them are broken down and a continuous tube formed.

Respecting the function of these vessels they [illegible] of the most important, they perform [illegible]

part in the nutrition of the tissues which is in a great measure affected by their agency but with this however we have nothing to do.

This agency in carrying on the circulatory function alone must occupy these pages. This agency is twofold - 1st they afford a communication between the Arteries and Veins and without such communication the circulation could not of course be maintained - 2d They exert a direct influence upon the circulation aiding in the movement of the blood. The last of these, namely that of aiding the circulation has long been a subject of dispute, many contending that their office is a purely passive one.

It will be necessary therefore to adduce some of the arguments which prove the position here made - It is asserted that the blood in the capillaries obeys some power distinct from that of the heart and larger arteries. Now a satisfactory argument in favor is to be found in the

fact that phenomena occur which cannot be explained on any other ground than the belief in a capillary power. Refer to blushing and similar irregular determination of blood. Reasoning by analogy, we find a circulation in plants and animals, of the lowest orders), in the absence of a heart.

This is maintained, doubtless by a peculiar and vital property inherent in the sap tubes of the plant, and vessels of the animal; we doubt then the existence of a similar property in that most completely organized of animals, Man?

He, possesses it is true a heart, but his structure is more complex, and his organs more numerous and thus [illegible] the vital properties [illegible] it is thus required to maintain the circulation throughout the structure of organs [illegible] we can consider a powerful organ like the heart to propel the blood to these organs and throughout the system generally. But more than this, [illegible] [illegible] from analogy [illegible] [illegible] of an independent

capillary circulation. We have what may be regarded as direct evidence founded upon facts chiefly ascertained by experiment. The heart of the frog has been excised and the blood seen to move in the capillaries for at least [illegible] after the operation. Cold applied for sometime is followed by a complete stagnation of the blood in the minute vessels of the part. they contract because they possess active vital properties. We are furnished with positive evidence in the existence of Monsters born without a heart. In these the circulation is maintained throughout the whole term of utero-gestation, the blood in them [illegible] must [illegible] kept in motion by a power inherent in these vessels, besides many other facts may be adduced affording ample sustaining evidence of an independent capillary circulation. Among these the carrying on of the circulation after general or complete death, the cessation of the heart's action is succeeded by the emptying of the arteries as well as the result of chemical [illegible]

in which the Medulla & Spinalis has been destroyed, followed by the immediate Stoppage of the general circulation, whilst the blood in the Capillaries still continued to move is not the least important. From these and other facts the conclusion is the Capillaries do exert a peculiar and decided influence upon the current within them and by virtue of this influence to be classed among the Motive Powers of the Blood.

Of the Veins. These vessels do not materially differ in Structure from the Arteries. They are not however nearly so much endowed with Elasticity.

The Veins greatly exceed the Arteries in number and size hence the capacity of the whole venous system is much greater than that of the Arterial.

The internal Coat of the Vein is of more interest than the others and it plays an important part in the formation of the valves which circulation has before. These valves are regarded by some as mere duplicatures of the lining membrane, whilst others have held the view which regards them as consisting of

distinct fibrous structure covered by epithelium.
These valves i.e. [illegible] two placed at the orifices of the Pulmonary Artery and Aorta. They consist of two sections, situated on both sides of the vein the edges of which are brought into contact completely closing the vessel. [illegible] differ from the Semilunar valves in as much as their free margins are nearest to the heart. They thus prevent anything like a retrograde movement of the blood. These valves are the chief means by which the veins aid in the Circulation. By their closure they not only prevent the passage backwards of the current but enable the vessels to exert a certain degree of lateral pressure upon the blood thus aiding its onward movement towards the heart.
In the Pulmonary Venous System the dark venous blood after being aerated or oxygenated and converted into arterial, is carried to the left side of the heart by the Pulmonary Veins. Thus presenting a singular case of arterial blood circulating in veins [illegible] being on the contrary conveyed by the [illegible] [illegible]

the Portal venous System. Here we have the anomaly of a vein being arranged like an Artery that is terminating in a complete system of Capillaries in the Liver from which the blood is again collected in the hepatic veins. The general or Systemic venous system commences at the Right Auricle by the two Venae Cavae. This system comprehends all the veins which correspond to the Arteries (Venae Comites) as well as the two large trunks just alluded to. . . . .

This concludes all that is intended to be said in this brief essay on the circulation of the blood. If any Apology be deemed necessary for the selection of a topic already perhaps sufficiently described the writers belief in its importance and general utility is all that can be urged in extenuation. It has been thought more tolerable to exhibit some acquaintance with a subject of a more practical character than to attempt the expression of what would necessarily from the writers inexperience be crude views in a line of discovery

subject, even should these views be entitled in a degree to the merit of originality.

The Physiology of the Circulation of the Blood is of much moment to form the [illegible] [illegible] even a slight knowledge of the numerous pathological changes to which this highly important function is liable. Without such knowledge, it is impossible to diagnose or treat properly any of the many diseases which primarily or secondarily originate in its derangement.

An

Inaugural Dissertation

on

Dysentery;

Submitted to the examination

of the

Provost, Regents and Faculty of Physic

of the

University of Maryland;

for the Degree

of

Doctor of Medicine,

by

Henry Tilghman Tolldsborough

of

Maryland.

Gentlemen of the Faculty,—

It can scarcely be expected that a Student of Medicine, whose knowledge of that important Science is necessarily derived from books, and who can of course furnish little or nothing from his own practical experience, should offer any thing worthy of even a passing notice at the hands of the learned Faculty of the Maryland University.—

And, were it not a prerequisite, that the Candidate for Graduation shall produce "a Thesis on some medical subject," I should much prefer passing to the final examination, without wearying the Faculty upon any topic with which they must be already well acquainted, and concerning which I can scarcely hope to exhibit any new or interesting facts. Wishing, therefore to obviate some of the objections alluded to, I have selected "Dysentery" as a subject, for these reasons: 1st, It is a disease

that can be concisely, yet clearly described —

2nd — It is so common in the Community, and so dangerous in its Character, as to require of the young Practitioner careful study & attention — and 3rd — because I intend, through the kindness of my esteemed friend & Preceptor Dr. Cox, to present for the consideration of the Faculty, views & doctrines somewhat at variance with those taught in the text-books & contrary to the experience & practice of most Physicians of the present day. — Before proceeding to the discussion of Dysentery, I would merely add, that it is desired the Faculty will make some allowance for the above remarks. — A considerable period has elapsed since I had the pleasure of conversing with Dr. Cox, and I would be unwise to [illegible] either him or myself in a false position. However, the Doctor [illegible] [illegible] furnished me a [illegible] with [illegible] his views & sentiments, which [illegible]

transcribed in a future Lecture. —

Dysentery occurs both epidemically & sporadically. — As an Epidemic, it was more prevalent, & raged with far greater violence in times gone by than at the present day. — In the 17th Century, some of the large Cities of Europe were annually visited by Epidemic Dysentery — or as it was generally styled, the "Bloody flux"; and vast numbers of people were swept off by it. —

But at this period the occurrence of dysentery as an epidemic is comparatively rare; — since better attention is now paid to hygienic & sanitary regulations, and the houses of our Cities are not crowded together as formerly without any regard to ventilation or comfort. — And here it may not be improper to remark, that the untiring perseverance, self-sacrificing zeal & earnest investigations of Medical men have wrought these and many other wholesome reforms for the well of the Community; — and while the latter are very willing to accuse Physicians of killing their

patients, or of protracting complaints in order to fill their pockets, they are ignorant or forgetful of the fact that it is to these same physicians they are indebted for the prolonged average of human life, & for comparative freedom from many loathsome & deadly diseases. — And again, although on the one hand, the accusation so often brought against physicians of "killing" their patients is in some instances doubtless correct, it is on the other equally true that through their exertions & investigations more lives have been saved, than were ever destroyed by "war, pestilence & famine". — Hoping this digression will be excused, [illegible] [illegible].

When dysentery breaks out in its epidemic forms, all classes, sexes & ages [illegible] are liable to be affected, & in different degrees of violence — but it is [illegible] the young & the old. These facts [illegible] my own observation, in the district of [illegible] County, where during the last summer

and Autumn dysentery prevailed to an alarming extent.— In spite of the skill & experience of the physicians a number of the oldest inhabitants were swept off, so deadly & obstinate a form did the disease assume.— An inquiry into epidemic dysentery generally, but especially as it occurred in the district of St. Michael's may not be out of place, as it will lead to an examination of the difference in the pathology and treatment of the disease, before hinted at.

To what cause then, shall we attribute the visitation of dysentery in the district [illegible] mentioned, remarkable for its healthiness & its freedom from the prevailing epidemic of the Eastern shore of the State, the so called bilious, or more properly, remittent & intermittent fevers? Is it possible in this case that the "miasmata" of the [illegible] acting [illegible] inducing a "state" of the hepatic & intestinal functions? The weight of authority is against the affirmative of these questions:— for whilst

Dr. Eberle says that "koino-miasmata have fre-
quently an unequivocal agency in the induction
of this disease", he in the next breath admits,
"that it is doubtful, whether paludal exhalations
are of themselves capable of exciting this affection"

Doubtless the latter opinion is correct:— for
the experience of almost every country practitioner
will warrant the assertion that "paludal exha-
lations," or marsh miasm, are conducive to re-
mittent, intermittent & continued fevers, rather
than to Dysentery. Another argument op-
posed to the malarious doctrine is— that it has
been observed in the march of large armies,
some particular regiment or company was more
exposed to the inclemencies of the weather
than others;— and the result [illegible] was [illegible]
the men of these exposed regiments were [illegible]
& violently attacked with Dysentery, [illegible]
[illegible] of the great [illegible] of tempe-
rature to which they were subjected; aided [illegible]
[illegible]

nance, had just & insufficient action;

Judging from these facts it would appear that when the liver is affected, it is so in common with the mucous membrane of the large intestines, all being in a state, primarily, of congestion; but as the secondary effect upon the latter is always that of lesion, which indeed may be considered the true pathology of the disease, it would seem a rational mode of treatment to address our remedies at once to this dangerous condition of the intestines, for "causâ sublatâ, tollitur effectus;" the morbid state of the colon & rectum being removed, the disease is at an end. And when the letter alluded to has been read, it will be found that this plan of treatment has been pursued, and with entire success. —

But admitting that the liver is always more or less affected in dysentery, does it therefore follow that our remedies should be so directed, as to cause an increased secretion of

that viscus? On opposition to this, may it not be true that the insufficient secretion of bile is of itself a good and not a source of evil, when we consider that the bowels in their inflamed and disordered condition, are thus deprived of their natural stimulus, & too often of an acid & malignant character. Now the treatment generally pursued is, to force the liver to action, just as we would in similar cases of malarious fever; - but the symptoms of morbid derangement & hepatic flow so well marked in the latter disease, & existing proofs of the poisonous effects of malaria upon the system, are not in any means so urgent, and yet the same rule of mercurial purgation is often pursued in both diseases. - It has been stated that the stench of miasm, which is the result of unventilation &c, is often a strong predisposing cause of dysentery, but that the liver is not affected to the same degree as when the system is under the influence of malaria

miasm. But if, as the general practice of physicians would lead us to suppose, the liver is almost always at fault, then the treatment by large & purgative doses of calomel would unquestionably be safe and beneficial. If we assert that the constipated state of the intestinal bowels, so far as the retention of faeces is concerned, is positively injurious by mechanical irritation to the inflamed condition of the intestines, then incidentally it becomes our duty, to remove the constipation at the outset by cathartics and enemata. On this point the opinion of medical writers would tend to the supposition that the retained faeces do not greatly aggravate the disease; and that in cases where the inflammation demands resort to the lancet, the medicines exhibited to unload the bowels are more injurious as local irritants than beneficial as purgatives. — In opposition to these views it may be urged that many eminent practitioners are in the constant habit of

administering purgatives as soon as the disease sets in, & that this mode of practice meets with entire success.- But still the argument against mercurial purgatives will not be invalidated, when we remember that these cases are of such a mild & simple character as not to require the use of the lancet- & that when resort to aperients, is necessary, they are of the gentlest character, such as Castor oil, magnesia &c, followed by the administration of opiates.- This is undoubtedly an excellent & safe method of treating mild attacks of dysentery,- by C. oil & opiates.- This is the plan pursued by many successful practitioners- but we should not forget when they do resort to this mode of treatment, they do not bleed; nor do they give a single grain of calomel.

Mild sporadic dysentery does not generally require the lancet. Leeches over the course of the colon will be found very advantageous in relieving the pain experienced in that region.- Opiate enemata, the warm bath, flannels

worn around the abdomen are useful to relieve the tenesmus. Warm diluent drinks may also be allowed. Should we have good reason to suspect hepatic congestion or portal obstruction, five grs. of Calomel at bed time, followed by a saline aperient in the morning, will be found of great advantage in relieving the dysenteric symptoms.

If the disease is still protracted, mercury should be used till slight salivation is produced. The same course should also be pursued when acute dysentery, the disease becomes chronic. Immediately upon the occurrence of salivation, a great change for the better is felt by the patient; & his improved condition is readily perceived. — Having thus treated of sporadic dysentery, it will now be necessary to mention its more and more dangerous types. —

When the 'idio-miasmatic' not, as a cause of dysentery, it sometimes gives rise to symptoms of a peculiar & dangerous character. — According to the statement of P. M. Latham M.D.,

respecting a fatal and singular dysentery, called by some "scorbutic", which prevailed in the Millbank Penitentiary, England, in 1825, it appeared to be the product of "idio-miasmatic, and atmospheric vicissitudes, or cold and humidity, operating conjointly." The epidemic, "spots or specs of a blue or livid color," appeared upon the lower extremities, and different parts of the body. The gums, teeth & breath were affected as they are in mercurial ptyalism. The patients passed pure blood, & a "fluid like the washings of flesh." Nearly all complained of a peculiar "sinking" sensation at the pit of the stomach. A committee appointed to investigate the cause of the disease, attributed it to the "constant and exclusive use of vegetables and farinaceous diet acting in conjunction with atmospheric inclemency." As might naturally be expected, great benefit was received by the patients, a proper regulation of their food. —>

Dysentery is the pest of all hot countries, especially during the summer months. At the approach of winter the disease abates considerably, & the cases which occur are generally of the sporadic variety. In more northern latitudes the inhabitants do not suffer a great deal from the prevalence of dysentery, & in these regions if the disease does show itself in the warm season, it entirely abates as the cold weather approaches. A cold damp air at night, the sudden vicissitudes of the weather which so often take place in hot climates, suddenly checking the perspiration & thus throwing the blood from the surface upon the internal organs, the liver, the bowels &c, producing congestion in them, may no doubt be looked upon as great & general causes of epidemic dysentery.

Sporadic cases owe their origin to the eating of unripe fruit, or indigestible food of any kind, which operate similarly upon the intestines,

whilst the general system is in an enfeebled & delicate condition.— Other causes are mentioned as scybalæ or hardened fæces — but their agency in producing dysentery is very doubtful, or at all events they are not worthy of particular notice.—

In the term dysentery, (from the Greek words δυς and εντερον) is implied an inflammation located in the mucous membrane of the colon and rectum, & characterised by frequent mucous & bloody stools, tormina, tenesmus & retention of fæces.

The disease is most usually ushered in by the patient's feeling a sense of oppression, lassitude, want of appetite, nausea, bad taste in the mouth, depressed pulse, slight chills alternating with flushes of heat, thirst, dry skin, transient pains in the bowels, costiveness, and occasionally diarrhœa. When the disease is caused by any substances that act immediately upon the mucous membrane of

the intestines, it usually comes on suddenly with griping mucous & bloody stools & tenesmus, without any premonitory symptoms of fever. — The pyrexia which accompanies dysentery is sometimes subsequent & then again is antecedent to the manifestation of the local symptoms. Frequently, at first the face is flushed & the pulse full & quick; but it soon becomes small and weak, the strength rapidly declines & the temperature of the body falls. — In acute dysentery the pain is often very severe, with remissions & exacerbations. — Great tenderness on pressure is experienced over the course of the colon. — The patient has frequent and urgent calls to stool, as though there were some accumulation only to be discharged; but after repeated efforts & straining he is only able to void a little slimy or bloody mucus, tinged in colour & resembling putrid flesh & often excessively fetid. Often the stomach sympathizes, & there is nausea & vomiting. Sometimes there is dysuria, ...

to reflected irritation from the rectum through the spinal column. When the case has a fatal termination, the patient becomes restless & anxious - does not sleep well - the pulse is very small & weak, the countenance assumes a cadaverous appearance, & death takes place at the heart, - in that peculiar form of it called asthenia. -

The morbid appearances upon inspection of the dead body are inflammation with thickening of the mucous membrane of the colon & rectum, & occasionally ulceration & sloughing chiefly of the large intestine. In very severe cases the whole of the large intestines are more or less the subject of inflammation & ulceration - the glands of the mesocolon & mesentery sometimes become enlarged & the omentum is bound to these diseased parts by "bands" which often produce strangulation of the intestines & may thus become a cause of death. -

There is a very general impression that dysentery is contagious, but the idea is certainly erroneous & has no foundation in fact. People have got this notion from the circumstance that dysentery is present in some visitations of continued fever — & having imbibed the disease, they erroneously attribute it to the dysentery. —

We come now to the treatment of acute dysentery — The prognosis is very generally favourable, provided the physician be called in at the commencement of the attack. All agree in the propriety & efficacy of general blood-letting; a large orifice should be opened in the vein, & the patient bled in the sitting posture "pleno rivo", till a decided impression is made upon the circulation. The bleeding may be repeated again & again, if the symptoms demand it. The employment of leeches over the course of the colon should not be neglected — they should be applied whenever we find tenderness upon pressure, indicating the existence of

local inflammation. – When leeches cannot be obtained cups may be used with almost equal advantage. Whenever indurations within the abdomen can be felt, & there is morbid tenderness on pressure upon them, the use of cups or leeches will give great relief. – If the indurations do not exhibit any signs of active inflammation in them, blisters will be found useful in reducing the hardness. The use of the warm baths a few hours after bleeding, will always be attended with benefit – they may be daily repeated. When the bath cannot be obtained, cloths wrung out of warm water, & renewed twice a day, may be applied over the abdomen.

Subsequent to bleeding, the following has been found a very useful prescription – ½ gr. Ipecacuanha, combined with blue mass & extract of hyoscyamus, of each 1 gr., repeated every three hours; 10 grs. of Dover's powder being given at night. When the evacuations have lost their slimy, bloody appearance, but are still small & frequent.

a little opium & acetate of lead may be advantageously combined with the Ipecacuanha.—

To relieve the dysuria which so often accompanies violent attacks of dysentery, injections of cold water are recommended to be thrown into the rectum.— They will also be found useful in checking the copious discharges of blood, especially if about ten grs. acet. Lead be added to the water. — The patient may be allowed diluent drinks, but they sh^d only be given in small quantities and at frequent intervals.— Great attention to the diet should be observed — the food must be of the simplest kind, & the stomach sh^d not be over-loaded. Opium has been found so useful in relieving the tormina & tenesmus, that it is very generally resorted to for this purpose. But the young practitioner should be very careful in the use of opiates — they should never be employed until the active inflammation is subdued by blood letting — & even

then with the greatest caution. The more prominent & distressing symptoms are often only masked by them, whilst fatal mischief is going on in the intestines. — Other forms & methods of treating acute dysentery are mentioned, but as they do not differ materially from that already given, it will not at all add to the interest of the thesis by transcribing them here. — It will be enough to say that mercury in some form or other, combined with Ipecac. & Opium enters into almost all the formulas for acute dysentery. — It is doubtless a valuable agent in restoring the secretions & chiefly for its revulsive action upon the intestines, but we may very much question whether it is not too generally used in cases of mild & simple dysentery. Unfortunately too much reliance is often placed upon it — dose after dose of calomel is given without effect — the disease progresses in spite of the remedies, & finally, the patient dies either by the enormous quantities of blood lost, or the inflammation running

on to ulceration, causing death by asthenia.
Or the patient may recover with a chronic
diarrhoea, which wastes away the resources of
nature, & can only be removed by long and
attentive treatment. Now the question is,
& it is to this point attention is most respectfully
invited, whether we may not rescue the patient
from death, or from a long & dangerous illness,
by the administration of opiates & astringents
immediately after the general symptoms of
inflammation are removed by the free use of
the lancet? Or whether, after a fair trial has
been given to mercury, we are not justified
in giving in bold doses, sugar of lead & opium &
ipecacuanha? In support of this view, in addi-
tion to what has already been said, I will state
that the case was related to me by Dr. C.,
in which the attending Physician, after using
the usual remedies without avail, & despairing
of saving the life of his patient, administered
(by the advice of Dr C.) sugar of lead & opium, united

by enemata of nitrate of silver, with entire success.

The use of nitrate of silver, mixed with some mucilaginous fluid & administered in the form of injection, has been repeatedly found to check the discharges from the intestines, when other remedies had in vain been resorted to for that purpose. — That the case related above is not the only one in which the employment of astringents has been attended with the greatest benefit, may be seen by reading the annexed letter from Dr. Cox.

(...)

My dear Sir,

You have asked my views of the pathology & treatment of Dysentery, & I afford me pleasure, altho' greatly hurried to respond to your wishes. You are aware that my opinions upon this and some other affections have undergone no small change since you first became conversant with my practice. I may mention Croup & Scarlet fever, among

the number, and confidently appeal to you for the increased percentage of successful cases of successful cases which have resulted from the new treatment.

Dysentery is, as you are are fully aware an inflammation of the mucous lining of the larger bowels; and characterizes by certain symptoms, among which that of the anus, tenesmus, & tormina, accompanied by mucous and muco-sanguineous discharges, usually in small & repeated quantities, are the most striking.

The diagnosis of Dysentery is so readily made, as scarcely to call for much notice at my hands. Tenesmus and heat of the anus are alone sufficient discriminating signs.

Dysentery may be found of all grades of violence. In some instances it is exceedingly mild, and very local in its character & extent. In other cases, however, it extends

over no inconsiderable part of the intestinal surfaces, producing a high grade of constitutional irritation or fever.

I come now to the treatment of Dysentery, which I have employed successfully, for two years, and the only approximation to which I find in an essay of an eminent Physician of New York, of very recent date.

In all cases attended by fever I bleed as freely in the commencement of the attack, as in other phlegmasiæ, and always with the best effect. My plan is to place the patient upright in bed — open freely the vein — and bleed plene et bene, until a decided impression has been produced upon the circulation. In all cases of inflammatory Dysentery the lancet is a sine qua non, and when freely used often spares much subsequent trouble to both patient & practitioner. I have rarely had occasion to bleed more than once; preferring to follow

the lancet, by moderate & repeated leeching over the abdomen.—

The next most important remedy consists in the combination to which I have often referred you, of opium, super acetate of lead, and Ipecacuanha. Remember that the most important step in the treatment of Dysentery, is the first step. Let your advantage in the early step be lost, & it often becomes irrecoverable. Be bold, and control the disease, and you have little to fear afterwards. The indications to be accomplished are in my judgment, — to lower the sensibility of the mucous membrane of the large intestines; and to diminish & change the quality of the morbid matters thrown into them. These objects are surely not to be fulfilled by purgatives, & especially not by Hydrogogues. These increase the sensibility instead of diminishing it. The Bile is fortunately at such periods suspended, as a consequence

of the diseased condition of the bowels, & should not be re-excited, (to act as a cathartic & irritant upon the delicate surface of the intestines) until the irritated condition is relieved by suitable measures. The sedative and astringent effects are therefore what you first need. No halfway measures must be adopted; no homœopathic doses employed; 2 grs opium; 1 of acetate of lead; and 1 of Ipecac, should be used after every evacuation, without regard to time, until pain & discharges cease entirely. After the lapse of 24 or 48 hours, should it be deemed advisable, a moderate dose of Ol. Ricini or Syr. Rhei aromat. may be used with a view to its laxative effect.—

The attitude of the patient is important—his hips to be elevated on a pillow so that the blood may gravitate towards the central portions of the bowels, thus relieving the load and plethora in the vessels upon the mucous surface of the rectum, which is

unquestionably the cause of Tenesmus & frequent disposition to stool. The diet should be farinaceous — and no drink but Gum: water used, and that in extreme moderation. The patient should be kept quiet — not allowed to converse — remove his position frequently in bed — or to get up to the close stool when it can possibly be avoided. —

I have thus given you, in general terms, the outlines of my theory & practice in Dysentery. I could add numerous cases in illustration of my views & the success of the treatment dependant thereon but deem it unnecessary. Suffice it that whereas before I adopted my present treatment my cases were often protracted and exceedingly ~~protracted~~ perplexing — I now rarely have a case of Dysentery to exceed in duration 48 hours, & know not when I have seen the disease, in my hands, terminate fatally.

Hastily,

& Truly Yours -

Christ. C. Cox -

Easton, Md -

Dec. 11th 1851.

To -

H. T. Goldsborough Esq.

Stud.t of Med.e

Univ. of Md.

An

Inaugural Dissertation

on

"Auscultation of the Lungs"

Submitted to the Examination

of the

Provost, Regents, and Faculty of Physic,

of the

University of Maryland,

for the

Degree of Doctor of Medicine

by

John Wesley Beard.

of

Anne Arundel County

Maryland.

1852.

# Auscultation of the Lungs.

By auscultation is meant the act of listening to the sounds developed in the interior of the body, made sensible to the unassisted ear applied immediately to the surface, or with the intervention of the stethoscope. This means of exploration was first employed in the diagnosis of disease by Laennec about the commencement of the present century. If we consider how imperfect must have been the knowledge, how uncertain the diagnosis, and consequently how precarious the treatment, in many cases of thoracic diseases, before this time, we may be better prepared to appreciate the importance of this discovery, to the advancement of medical science. Thoracic diseases are among the most common and most dangerous affections that come under the care of the physician, and being often obscure and difficult of diagnosis, it is evident that whatever is calculated to facilitate the discovery of their nature,

and thereby indicate the proper therapeutic means to be employed for their cure, should be diligently studied by every practitioner of medicine.

Although of incalculable service in the investigation of diseases of the respiratory organs, auscultation furnishes us equally important information in relation to morbid conditions of other parts of the system. It is by this means that we are enabled to form a diagnosis of cardiac affections both organic and functional, and that we ascertain the nature of certain morbid conditions of the contents of the abdomen.

Auscultation is likewise of great utility to the surgeon in the diagnosis of fractures of the bones; it also enables him to discover the existence of aneurism, and to distinguish it from other tumours, to which, in some respects it bears a strong resemblance.

To the obstetrician also auscultation lends its aid in ascertaining the existence of pregnancy

of which it furnishes the only reliable sign, for when he hears the pulsations of the fetal heart, he is no longer in doubt as to the nature of the case. In short, there is no branch of medicine to which auscultation has not been of great advantage; but it is to the practitioner of medicine especially that it affords the greatest assistance, and to whom it has opened a field of observation and research, that had remained uncultivated previous to the beginning of the present century.

It is not my object to treat of auscultation in all its various applications, but merely to study it in relation to the respiratory organs and to describe the conditions that it indicates.

There are two modes of applying auscultation to the chest; the mediate in which the stethoscope is used; and the immediate in which the ear is applied directly to the surface. Of these the latter is the most common as well as the most convenient.

There are however some circumstances in which the stethoscope is preferable, as in the case of females, or when we wish to listen to sounds in a very narrow space, as over the valves of the heart, or in places to which the ear cannot be immediately applied, as in the depression below the clavicle in emaciated patients, and in the axilla. These cases excepted immediate auscultation is better, as the head can be moved from one part of the chest to another with more facility and with less loss of time. The head also receives a support against the body of the patient thereby preventing the distraction of the attention which is apt to result from an awkward and unsteady position. The instrument is also objectionable on account of the noise it makes by rubbing against the ear, and the difficulty of keeping both extremities in a proper position.

When the chest is to be examined it is

be either naked or covered with some thin substance as a linen towel or the under dress of the patient. The patient may sit or stand, as is most convenient for him, and the operator should assume an easy position taking care that his head be not lower than the rest of his body and thus confine his hearing. During the examination of parts that lie beneath muscles, these should be in a state of relaxation.

The auscultatory signs of the healthy chest will be first considered, after which the modifications and changes resulting from disease will be taken up. The sounds discovered by this process are caused by the acts of respiration, voice, and cough.

In a healthy condition of the respiratory organs two sounds are distinguishable, one termed the vesicular murmur, which is produced by the passage of the air from the ultimate bronchial tubes into the air cells, the other the bronchial or tubal caused by the air impinging against

the inner surface of the bronchial tubes in passing through them.

The vesicular sound, or as it is sometimes termed the respiratory murmur is not easily described, it is a soft, diffused murmur, somewhat resembling the rustling of a gentle breeze among the leaves of a tree, especially the pine tree. Like all auscultatory signs, it must be heard in order to be correctly appreciated. It may be heard over every part of the chest where the healthy pulmonary tissue comes in contact with the thoracic walls. It is observed both in inspiration and expiration though it is much fainter in the latter, as the air passes out of the bronchial cells into the bronchial tubes and therefore yields more feebly. The respiratory murmur is heard with nearly equal distinctness at corresponding points on both sides of the chest. There are however certain circumstances that cause the sound to differ considerably in healthy individuals; it can be

heard more distinctly in thin persons than in those of the opposite condition. It is louder during hurried respiration, and longer after a full inspiration. In some persons the sound is so feeble as not to be distinguishable unless they be directed to breathe rapidly and forcibly or to cough. In children it is louder than in adults, hence termed puerile respiration, — whereas in the old it is below that of the healthy adult, and is therefore said to be senile.

It is generally increased in intensity in nervous hysterical females, and in males of an excitable nervous constitution. In some instances also a considerable difference in the character of the respiratory murmur occurs in persons of apparently the same constitution, of which it is impossible to determine the cause. Thus we perceive that there is no fixed standard of the healthy vesicular murmur, and that in every case we have to compare the sound on one side of the chest with that at the corresponding point on the opposite side and if

they are found to vary in any marked degree there will be a strong probability of the existence of disease.

The bronchial or tubal sound is of a blowing character, similar to that produced by blowing forcibly through a tube. It may be distinguished from the vesicular murmur, by the circumstances, that the tubal is louder and ruder, that it is nearly equal in inspiration and expiration, and that there is a perceptible interval between the two acts. The cause of the latter difference is that the air after passing the point where the bronchial sound can be heard, enters the air cells and consequently a space of time will elapse before it arrives at the same point again. It is sometimes mingled with the vesicular murmur producing what is termed rude respiration. The bronchial sound is best heard over those parts of the thorax where the bronchia are most superficial, or least covered by the pulmonary tissue as under the upper part of the sternum beneath the clavicles, and on the back above and between

the scapulae. It cannot be heard in the lower portions of the chest in health, owing to the imperfect conducting power of the spongy pulmonary structure, which lies over the bronchial tubes. It can be heard with greatest distinctness over the trachea where it is termed "tracheal" it is also generally louder on the right side owing to the larger size of the right bronchus.

The sounds above described are observed in the healthy state of the respiratory organs, and are such as we would be led to expect, from a previous knowledge of the anatomical structures concerned in their production. It is also obvious that whatever alters in any degree the physical condition of the parts must cause corresponding modifications or changes in the physical signs. These will now be considered, and the diseases pointed out, in which they occur.

Whatever prevents the whole or a part of a lung from performing its function will cause the sounds in the healthy portions to be [illegible]

quicker, on account of the increased duty thrown upon them. This occurs in solidification of the parenchyma of the lung, as in the second and third stages of pneumonia, and in phthisis, it likewise results from emphysema, hydrothorax, pneumothorax, hydropneumothorax, or pleuritic effusion compressing the lung and arresting respiration. Obstruction of the bronchial tubes and the pressure of tumours will produce the same effects. This increased action of the healthy lung is generally designated by the term puerile respiration. The vesicular murmur is occasionally feeble or absent in particular regions of the chest, according as the air is imperfectly admitted or altogether obstructed in its passage into the air-vesicles, both of which may be caused by the presence of tubercles. The duration and continuity of this sound may be altered, thus sometimes it is not heard at the beginning of inspiration but becomes evident before its close; this sometimes occurs in the middle

causing temporary obstruction of the tubes, and in slight pleuritic effusion not entirely compressing the lung. Sometimes in spasmodic asthma the sound though heard at the commencement of inspiration, ceases before it is completed. The vesicular murmur may be interrupted or jerking, so as to be heard at successive intervals, as in pleurisy or pleurodynia. There may be an intermission in the sounds of inspiration and expiration owing to distention of the air cells in emphysema. Sudden emotion will sometimes stop the respiratory murmur; this is apt to result from the examination of the chest for the first time, and to avoid being deceived by this circumstance it is often necessary to examine a second time.

Rough or rude respiration caused by the mingling of the bronchial and vesicular sounds, which has been mentioned before as occurring in health is sometimes produced

by disease. It is usually occasioned by a slight amount of condensation of the substance of the lungs which makes it a better conductor of sound, without closing the vesicles, so that the bronchial respiration is rendered audible and is mingled with the vesicular murmur which is increased or diminished in proportion to the existing disease. This sign accompanies incipient phthisis, pneumonia, and pleurisy.

The bronchial sound in disease becomes audible in regions of the thorax where it was not appreciable before. This depends on solidification of the lung with obliteration of the air cells and minute bronchial tubes, so that the air can enter only the larger bronchia, and the lung being increased in density conducts the sound more readily to the surface. The sound is similar to that which is heard in health at the root of the lungs, but is more continuous. It is sometimes produced by a dilatation of the

bronchia without any change in the air vesicles, in which cases the vesicular murmur is commingled with it. When solidification of the lungs coexists with increased caliber of the bronchial tubes, the sound is most intense and of a metallic character as if produced by a brass pipe; under these circumstances it is said to be tubal or tubular.

Cavernous respiration is that hollow, blowing metallic, circumscribed sound, produced by the passage of air through a cavity of moderate size. It is said to be amphoric when the cavity is large with firm walls, and is similar to the noise produced by blowing into an empty bottle. It may be heard in the respiratory acts if the opening into the bronchial tube be sufficiently large; if on the contrary it be small the sound is not distinct during expiration. In this condition it may be rendered perceptible by a forced inspiration, when it cannot be otherwise detected.

There are other morbid conditions in which the healthy respiratory sounds are not only modified, but altogether superseded by others which furnish very important information concerning the existing disease. These are termed rales or rhonchi. These rales are either dry or moist, the former produced by the rapid motion of air through tubes whose caliber has been diminished by inflammatory thickening of their walls, adherent secretions, spasmodic contraction or external pressure; the latter (moist) are caused by the passage of air through fluid effused into the bronchiæ, giving rise to the formation and bursting of bubbles. The dry rales are subdivided into the sibilant and sonorous, the moist into the mucous, submucous, crepitant and subcrepitant.

The sibilant rale is a hissing or whistling sound, heard in both the respiratory actions or in either exclusively, sometimes sharp and shrill, ceasing almost immediately, again it

is prolonged and of a lower tone. It is commonly produced in the smaller tubes, though it may occur in those of larger size, when their calibre is lessened, as in the early stages of acute bronchitis, and spasmodic asthma.

The sonorous rale is a musical sound, of a deep or grave tone, and has been compared to the snoring of a man, the humming of a gnat, or the plaintive cooing of a wood pigeon. It differs very much in intensity, being sometimes so feeble as to be scarcely appreciable, and occasionally so loud as to be heard at some distance from the chest. It may accompany either inspiration or expiration, though most commonly the latter. It occurs in the larger bronchia, as the grave tone cannot be produced in those of small diameter. There is a modification of this sound, called the dry mucous rale, which is caused by a thickening of tough mucus blocking up the tube and yielding at short intervals during each inspiration, and thus producing a kind

ing crackling noise, which is after a while converted into the sonorous rales. This rale occurs in the earlier stages of acute bronchitis, in which it is often united with the sibilant and mucous. The mucous rale occurs in tubes of the size of a crow's quill or larger, and is owing to the presence of fluid, which causes the formation and bursting of bubbles during the passage of the air. It is heard in the second stage of bronchitis after the commencement of secretion, and is sometimes accompanied by the sibilant and sonorous rales in the neighboring tubes, giving rise to a peculiar association of sounds resembling the singing or chirping of birds in a cage. A similar sound sometimes occurs in the smaller air tubes, consequently it is finer and is termed the sub-mucous rale. This accompanies the slight bronchitis attending incipient phthisis. There is also another variety of mucous rale occasioned by the air moving through a cavity partly filled with liquid, or through a largely dilated tube

occupied by mucus: this sound is rude in its character, sometimes gurgling and hollow and is termed cavernous respiration. When produced in a cavity, it is more circumscribed than the mucous rale, but if depending on the dilatation of the bronchia it may be diffused over a considerable portion of the chest. The crepitant rale is a fine crackling sound, with minute, sharp, equal crepitations, and is compared to that produced by salt thrown on hot coals or metal; but perhaps it most nearly resembles the noise produced by rubbing a lock of hair between the fingers in the vicinity of the ear. We hear this crepitation in the first stage of pneumonia after lymph has been effused into the minute bronchial tubes and air cells, to which it is confined. That it is owing to the presence of lymph is generally admitted, but the manner in which it is produced is a subject of dispute. By some it is referred to the bursting of minute bubbles of the mucous

secretion), while others consider it to be owing to the separation of the surfaces of the tubes and cells, which have been glued together by the effused lymph. This view is thought to be confirmed by the fact of the sound being heard only during inspiration, which is said to depend on the expansion of the tubes continuing till the air returns, so that the condition necessary for its production is absent. This however may be owing to the passage formed by the edges of the air remaining open for a time, in consequence of the density of the effusion, and thus permitting the air to pass not without resistance and therefore without noise. After this rale is once heard it continues for some time, and is not removed by coughing and clearing out the bronchia as is the case with the mucous. There is another crepitant rale, which is louder and coarser than the first and sometimes heard in expiration. It is similar in its character to the subcrepitant.

The subcrepitant is coarser and ruder than the crepitant, and finer than the mucous, being intermediate between the two. It is heard in phthisis, and is characteristic of the bronchitis that accompanies this disease.

Another sound indicating the presence of disease is metallic tinkling, which is quick and sharp, similar to that produced by striking any small metallic body against a glass vessel. It has been attributed to various causes by different writers, and the precise condition upon which it depends is still a matter of doubt. Some consider the existence of a cavity filled partly with air and partly with fluid as essential to its production; and they ascribe it to the passage of a bubble of air through the fluid, or to the falling of a drop of liquid from above into that below. One author suggests it to be owing to the bursting of a bubble of air on the surface of the liquid, while another refers it to the giving way of some obstruction

in the orifices of the tubes communicating with the cavity, as the air enters during inspiration or passes out in expiration. The most probable explanation is given by Dr Williams, that it is produced by the sudden vibration of the air in the cavity, as in the act of speaking or coughing. It is not confined to cavities containing air and liquid, though occurring most frequently under these circumstances, and is seldom heard in closed cavities. When, as most frequently happens, it occurs in a cavity having an external communication, it is accompanied by amphoric respiration.

Another morbid condition gives the friction sound, which as its name implies is produced by the rubbing together of two rough surfaces. It is observed in the early stage of pleurisy when lymph has been effused to such an amount as to roughen the opposite pleurae, sometimes also a small quantity of serum is poured

out, and being soon absorbed, permits the two rough surfaces to play upon each other. This sound is sometimes so intense as to resemble that which would be produced by rubbing a brush against the inner surface of the ribs. It is heard in inspiration and expiration, and may be distinguished from the friction sound of pericardilis, by its ceasing when the patient holds his breath. When however this sound results from the opposite surfaces of inflamed pleura situated over the heart, rubbing against each other during the action of that organ, the diagnosis would be difficult.

The signs furnished by modifications of the voice and cough, are sometimes very valuable indices of the condition of the respiratory organs, and are very important elements of diagnosis. If the ear be applied directly or through the intervention of a stethoscope over the trachea of a healthy person and he be directed to speak, the words

will be heard very loudly and distinctly. The sound thus produced is termed bronchophony. By listening in the same manner over the upper part of the chest a little below the clavicles in front, and between the scapulæ behind, bronchophony may be distinguished. Bronchophony is occasioned by the resonance of the voice through the larger bronchial tubes, and is a confused sound, in which the articulated words cannot be heard. The alterations produced in bronchophony by disease have reference to its situation and forces. It can be better heard in thin persons, whose thoracic walls transmit the sound more readily than those of the opposite condition. It may be heard over a greater extent of surface in those who have a voice of a high key, as in females and children, while the bass voice causes a general vibration of the chest. It is generally stronger on the right than on the left and in front

than behind except between the scapulae. In health it is heard over those parts of the chest where the bronchial respiratory sound is present. The extent and degree of these sounds differ so widely in individuals, that we have in each case to compare the two sides with each other, and when they are observed to differ considerably we have good reason to suspect the existence of disease. Bronchophony and vocal resonance may be diminished or suppressed by collapse of the lung from any cause, by pulmonary emphysema, pneumothorax or hydrothorax, or compression of the lung by a tumour. They are however more commonly increased in disease, as in phthisis and pneumonia in which the density of the lung is increased and it conducts the sound more readily to the surface. In these cases it is heard over a greater extent of surface than in health.

Bronchophony may be modified by the presence of a small amount of effusion in the pleural cavity, the impulse of the voice in passing through the liquid imparts to it a vibratory movement, which causes the sound to assume a tremulous irregular character which from its resemblance to the bleating of a goat, has been termed aegophony. It will be more distinct if the lung is consolidated at the same time.

Another variety of morbid vocal resonance is that in which not only the sound of the voice is heard, but the articulated words seem to proceed directly from the chest into the ear. This is termed pectoriloquy and is occasioned by the presence of a cavity in the lungs. It may sometimes be formed in a dilated bronchial tube, and may be distinguished from bronchophony by the distinctness with

which the words are heard, and by the sound being more circumscribed and limited in extent in pectoriloquy.

Amphoric resonance is produced by the voice in a large cavity, with firm walls, communicating with the bronchia by a small aperture. In this case the voice is not articulated as in pectoriloquy, and does not seem to enter the ear as in bronchophony, but never berates through the cavity, and has a ringing metallic sound similar to that produced by speaking into a hollow broad mouthed vessel.

The cough which in health causes a short, dull, undistinct sound in the chest undergoes various changes in disease. Thus it is said to be bronchial when accompanying bronchophony and resulting from the same causes, cavernous when pectoriloquy occurs, and amphoric in large cavities with firm walls and narrow outlets.

The signs of vocal resonance and respiration commonly depend upon the same physical conditions and generally coexist in the same case. Thus rough respiration and increased resonance, bronchial respiration and bronchophony, cavernous respiration and pectoriloquy, and amphoric respiration and amphoric resonance usually accompany each other, and mutually assist in forming a diagnosis.

Auscultatory signs are frequently insufficient of themselves to point out with certainty the existing disease; in these cases they will be corrected or corroborated by those furnished by percussion, and the two combined will seldom fail to give the necessary information. There are cases however in which if we trust to physical signs alone we will err in our diagnosis or be unable to determine the existing disease; of this we have an example in that form of pneumonia which

is seated in the interior of the lung, and being surrounded by healthy tissue, gives no physical symptom of its existence. Thus it will be perceived that, while auscultation and percussion should never be omitted in the investigation of thoracic affections, we should also pay due attention to those general symptoms by which all diseases are accompanied.

A New Inaugural Address

On

Inflammation

Submitted to the Examination

of the

Board of Regents and Faculty

of Medicine

of the

University of Maryland

for the

Degree of Doctor of Medicine,

by

Geo Washington Dixon

Baltimore City

Maryland

February 12th 1852

To the Faculty of the
University of Maryland

Gentlemen

In compliance, with the statutes, laid down in your circular, it becomes obligatory, for each and every candidate, for the degree, of Doctor of Medicine, to submit to your most worthy consideration, a thesis, of his own composition, upon some subject connected, with the medical science. In viewing the numberless pathological changes, that are constantly taking place, in the body, of man, and the phenomena that accompany them, I find it utterly impossible, to discover any organ or any change, that it is liable, to undergo, but what has been the theme, of discussion, for men, whose intellectual faculties, and literary attainments, combined with their [illegible] station in life, enable them, to explain so clearly and satisfactorily, any pathognomonic change, that may take place, on account of the injury, or by the disturbance of the functions

of any organ, in the system of animal economy, that it will be worse than useless, for me to attempt to offer one thing that will be any way edifying to your already well stored minds, and being conversant with every branch of the Medico Chirurgical, and all the phenomena, pertaining thereto, that are so interesting, and novel to the student, have long since, become tiresome to yourselves.

But with the motto, Omnia vincit, perseverantia, I may succeed.

In selecting a subject of any kind, it is proper for one to chose, that with which he flatters himself he is most familiar with, on account of the knowledge, he has obtained, of it from books, written by men who are considered, to be the highest authorities, as it is, in such works that a student acquires, his ground work of medical, knowledge, ...

foundation, for further improvements;

In my weak judgment, I have chosen, a subject, which I suppose, on account of the interest, that men whose names and doings, will be forever remembered, in the annals of Medical History, have taken in it, and which received the attention of all the great men, of this enlightened age, must be the source, from which arises a great amount of evil, or springs, an inexhaustible mine, of good, I allude to Inflammation.

The word inflammation, is derived, from the latin word, Inflammo, to burn, and as heat, is one of the symptoms, of inflammation, the changes, that take place, can not be strictly, called, inflammation, unless heat is present, in a more or less degree.

Inflammation, has been defined, in different ways, by [illegible] authors, [illegible] but I think, [illegible] must conclude

-hensible. It is an unnatural, or morbid, state, of the capillary system, of an organ, or part of the body, consequent of irritation, attended, with redness, throbing, swelling, pain, heat, and disorder of its functions as well as with more or less constitutional disturbance; in the language of Celsus of old, Notae inflamatio sunt quartae rubor et tumor, cum calore, et dolore.

Inflamations are divided into various types, and kinds; as healthy, or adhesive, is that which disposes the parts, to heal, or cicatrize. Unhealthy, is that which is disposed to ulceration, or according to Galen ulcerative absorption, and sloughing. Common that produced by incisions, or punctures specific, is that induced by innoculation as variolae. Inflamation has another subdivision into acute, subacute, chronic, active, and passive, the two latter, are very similar, if not

identical, with the former, all having reference, to its intensity and duration. The term of Phlegmonous inflammation, has been given, to a particular kind, on account of it being circumscribed, and disposed, to suppurate, as Furunculi. Another type has obtained, the name, of Erysipelatous, on account of it being more diffused, and less disposed, to suppurate. Gangrenous inflammation, is that which tends, to Mortification, or the death, of the part.

Redness is the first, sensible sign of inflammation, and it is caused, by an unnatural, or increased flow of blood, to the part.

According to the theory, advanced, by some of the writers, that in their normal condition, carried, white blood, or in more definite language, the colourless parts, of the blood, become distended, and admit

the red corpuscles, which on account of the rapid accumulation, become stagnated, and the vessels lose their contractility on account of the great distention are not able, to disengorge, themselves, necessarily keeping, a larger amount of blood, than natural, in the part from whence arises, the preternatural redness, which is generally, a sign, of the inflammatory action, but it may exist with or without it, and also continue, sometime after the subsidence of the inflammation. Some writers, say that the capillaries carry red blood, all the time, which is very plausible, and possible, but not demonstrable, which they say is on account, of the minute calibre, of the vessels, being large enough, to admit, only one corpuscle, at a time, and its diameter being, only one three thousandth part of an inch, it is not perceptible to the eye, and according to

that theory, the redness, is not produced, by an error loci, of the blood corpuscles but by an unusual quantity, of them that are stagnated, in the foci inflamma-tionis.

Throbbing is a symptom, of inflammation, [illegible] is present, and felt in a more or less degree, which is caused, by the deranged condition, of the part, which produces an increase in the collateral circulation.

The throbbing is not caused, by the capillary system altogether, but in part by the large trunks of vessels, in the neighbourhoods, sympathizing with them and having their action, increased.

The obstruction of the capillaries, [illegible] the part, [illegible] large vessels, which is productive of an increase, in the velocity, of the blood, and if the inflammation, which is of a high grade, and the organ affected, [illegible]

to the sustainment of life; the sympathetic excitement, that is set up in the system, is very serious, very often involving the life, of the patient.

Swelling is one of the symptoms, of inflamation, which is caused, by the engorged vessels relieving themselves, by effusion, into the surrounding cellular tissue; when it takes place, in loose, cellular tissue, it is looked upon to be a favourable effort, of nature, but when it takes place, in a vital organ, serious are the results, by obstructing its functions. The effusion, may be serum, lymph, or blood, and often pus, for the effusion, varies according to the violence, of the inflamation, its advancement, and the nature of the texture, in which it occurs.

In inflamation, the process of excretion, is at first diminished, and afterwards so much increased, that the absorbent

system, either remains the same, or is very much diminished.

Pain, is the next symptom, which is the most valuable, as regards, the state of the part, for it is by that, we are informed, of the diseased condition, of any part, of the body, and if we were not sensible of the pain, we would use and exercise the part, thereby inflicting great injury, both and aggravating the disease.

But according, to the wise provision, of nature pain, is felt, as a warning, of the approaching danger, and the patient naturally resorts, to such means, as will alleviate, his suffering, the most natural, and the simplest treatment, is a quiet state of the part.

The phenomenon of Pain, as a consequence, of inflammation, may be explained, in this way. The muscular, and nervous systems, are only generally, and intimately connected, may be ... as the ... ...

and are dependent, mutually upon each other, for the performance of their functions.

Pain must exist, in a more or less degree in all inflamation; especially if we have swelling, consequent of effusion, which is generally productive, of pain.

Swelling, as is before stated, is produced, by a congested state, of the capillaries, of the part, together with the effusion, that takes place, in the surrounding cellular tissue, which presses on the nerves, in a more or less degree, and as the nerves, are often in the same sheath with the arteries, which supply them, with the congested capillaries, they have their volume, increased, and necessarily press upon the nerves, that accompany them, and the sensation is transmitted, to and from the brain, without which our bodies, would [illegible] with out our knowledge.

Heat is a symptom, of inflammation, [illegible] [illegible] nature [illegible], of course, a state [illegible].

the normal temperature, of the body, and fever heat which is greater or less according to the situation, of the part in which it occurs, in the extremities, it is less than in the body, in the trunk the heat of inflamation does not exceed the natural heat, more than two or three degrees, while in the extremities, there is a difference of five or six degrees, and then it very rarely ever exceeds the temperature, of the blood, at the centre of circulation; the increased temperature, of an inflamed part, is owing to an unusual flow, of arterial blood, to it, and, of course, an increase, of oxygen; and as heat is generally evolved, in all chemical changes, the warmth that is perceived, is caused, by the associated action, that takes place between the oxygen and the constituents of the tissues, their carbon and hydrogen, uniting with a proper amount of oxygen, produce such an amount of warmth

as is essentially necessary to health, but when there is a superabundant amount of oxygen, the changes that take place, are deleterious to vitality of the animal tissues, hence arise the events of inflammation.
The presence of unnatural heat, either implies or establishes the presence of inflammation, for you may by exercise, friction, or fire produce it. The temperature of the body is increased, moreover, in some class of inflammation which may not be appreciated by the patient, or perceived by the physician. The heat of inflammation is less annoyance to the patient, than the pain, for the perception of heat is pain.
There has been much dispute, as to the results of inflammation. Until lately, some say the terminations are three, resolution, suppuration, and mortification, others say there are but two terminations, resolution or a restoration of the part to its healthy condition, and

mortification, or death of the part.

When speaking of so an important a subject, as inflamation it would be proper to have such phrases as could not be objected, to by every writer, on the subjects; for certainly there can be but two terminations, to any diseased condition of the body, either a complete cessation, of the morbid action, or a fatal terminations.

Inflamation may take on resolution and the parts recover thier normal condition, or it may run on to mortification, gangrene, and sphacelus, two states which must be called the terminations, of inflamation and all the other morbid changes, that take place must be considered as events.

Resolution is the most salutary termination of the inflamatory action and there seems to be a natural tendency to bring this about which is accomplished, by getting the blood, that was stagnant in the capillaries, in motion.

by the absorption of the effusion, if there is any, and the larger vessels ceasing to sympathize with the capillaries, and returning to their normal condition, this change has been called a spontaneous cure.

The other termination will be explained by a explanation of the phenomena, or events, that lead to it.

The first event of inflammation, that shall occupy our attention, is effusion of serum, so called because of its similarity to the serum of the blood, which no doubt it is being slightly modified, on account of its change of situation, from the walls of the vessels into the cellular structure. by exosmose, which is accounted for in this manner: the minute fibres, of which the capillaries are formed, in their healthy state, are closely adapted and interwoven with each other, so that there is no room for effusion, to take place, but when they become engorged, the tension is so great, that the spaces between the fibres

of the vessels increase in a more or less degree, and the fibres being debilitated, by over distension they relax, and the more watery part of the blood escapes.

Haemorrhage may take place in the course of inflammation, caused by some small vessel giving away by the tension of the part or the amount of effusion may have ruptured them, for we often find blood mixed with other effusions.

The effusion of a substance, called coagulable lymph, often takes place in the course of inflammation, which is nothing but the fibrin [illegible], in excess, [illegible] separated, from the serosity of the blood.

The effusion of lymph, is often [illegible] of serious mischief, as in [illegible] of the lymph often [illegible] to attach to one another, especially the [illegible], as the pleura, the peritoneum, and [illegible]. It is generally thrown out on the edges, of a cut in a [illegible]

hours, and if brought in contact, they will unite, this is called, by surgeons, union by the first intention.

This stage, is called, Adhesive inflammation. The power of adhering, seems to be peculiar to coagulable Lymph, and may be considered a destructive, and pernicious consequence, but in the multiplicity of cases, produce a salutary effect, for it is better that the pericardium, should adhere than the motion of the heart, should be stopped by the effusion.

Organizability, and vascularity, are peculiar properties, which belong to lymph, to which it owes its separative [illegible], which belongs to lymph.

To produce the effusion of lymph, the inflammation must attain a certain degree of intensity, [illegible] it must be prevented, [illegible] upon it, under all causes, if [illegible] now be [illegible].

effect of the inflammation, goes beyond a certain degree, the production of pus, will interfere with the adhesive stage. The next event of inflammation, in order is supperation, by which we mean a breaking down of the parts, and softening of the effusion, consequent of a chemical change than takes place, on account of the then -ness, that is necessary for the vitality of the fluid, which is found only, which is the serum of the blood, being absent, or it is beyond the reach, of the nervous influence, that is exerted, on the particles of the blood, by the coats of the arteries, for this influence is continually necessary for to maintain its vitality, when the blood, leaves, and, when ever it is drawn off, or the blood, or parts of the is without its reach, they must necessarily perish, molecule by molecule, and if there is a quantity of serum, by the softening,

process, it formes an opake, smooth, yellowish, creamy, inoderous, fluid, called pus, which when it points and discharges is called an abcess, and on account of the particles dying, one by one, we account for the tardiness, of some Phlegmonas, in softning, whence arises the excessive constitutional irritation, that is often set up.

Pus is said to be a liquifaction, of an exudation, with a tendency, to external rejection.

There are various names, for the kind, of pus, which is most desired, to be present, and which is produced in all favourable inflamations, such as was called, by the old, surgeons, Pus Traudable, and which is discribed, by Hippocrates, in these, emphatic, words,

Τὸν δὲ πυὸν ἀρίστον λευκὸν τε εἶναι καὶ ὁμαλὸν καὶ λεῖον καὶ ὡς ἥκιστον δυσῶδες.

The pus globules, are considered to be the globules, of the blood, deprived of their colour, by some the colourless corpuscles, others say they are hollow cells.

When the globules, are few in proportion to the watery part, of the effusion, the pus is called ichirous, when mixted with blood, sanous.

The tendency of pus is directly opposite that of lymph, the former tends to break down the tissue, the latter, to straighten, and harden them.

The duration of time, for the formation of pus, is not certain it may be produced in two or three hours, and again it may take days, or months.

Ulceration as an event of inflammation, is the process, by which ulcers, and sores are produced, or it may be called a function of the absorbents, attended by a solution of continuity, and the formation of pus;

For when ever the absorption of the part that is effused and the surrounding tissue, is greater than nature, or in excess the result is ulceration.

In ulceration there are three changes that take place, which should be understood, as well and thoroughly comprehended by the practitioner of medicine, as by the surgeon or by a certain knowledge of such changes, the cause of them, their consequences and the results, they produce, he may apply remedies by which, he will be able to bring about the condition of the part, that nature shows, by her efforts is the most salutary.

The changes, that take place, are these; first the effusion of plastic lymph, by which what is called granulations are formed, they spread over the ulcer, it fills up, has a healthy appearance, and heals by a process called, cica-

-trixation. When the process of suppuration, and absorption, are not both active, but the process of absorption predominating, the extention of the ulcer is rapid, and is called Phagedenic, it grows larger, and, the tissues perish in masses, which are called sloughs: sometimes it is slow, and the edges are hardened, then it is called a callous or indolent ulcer, & when the granulations are very exuberant, and then it is called a fungus ulcer, and the granulations, on account of their protruding beyond the surface, of the ulcer, are vulgarly called proud flesh.

Having spoken of the different pathological changes, which take place in inflammations, we will now speak of the final termination, that they usually lead to, if they are permitted to proceed, Mortification.

When mortification takes place, it is

certainty at the expense of the vitality of the parts.

The blood that in health, so well summoned along the arteries, like so many rivulets, infusing itself in fibre of the parts, imparting vigor and strength to the whole system, is stationary now, the part is deprived of its nourishment, the healthy red colour, that is natural to it is gone, and is superseded by a mottled, purple, greenish, or black, it vesicates, air is extricated by the chemical decomposition, that takes place, it has a cadaverous odor, there is no sensation in it, the nerves, that in health transmitted to the brain, the sensation of injury, done the part, are now useless cords, and as her last work, nature sets up a process, by which she would relieve, herself of the useless burden.

She marks out the boundary line, where she effects by adhesive inflammation, a

opposing a barrier of lymph, as a sub-guard, there by preventing the progress of the mortification.

The process of ulcerative absorption forms a furrow, which gradually deepens, until the part is excised, the vessels are sealed up with coagulable lymph, which is easily effected, because the blood is all ready stagnant, on account of the obstructed circulation; It is from this effort of Nature, that we obtain the Idea of amputation, for we are constantly imitating nature, in assuaging any desease, which we do very imperfectly. The barrier of lymph, which seals the blood vessels, is one of the wisest provisions of nature, for without it fatal hemorrhage would ensue, and our patient would perish.

Mortification is not a constant result of inflammation: certain conditions and causes, are more or less productive of it

often the intensity of the inflamation is the cause, and, also anything, that stops the flow of arterial blood, in the part; much necessarily promote, the death of the tissues, because the blood is the life and nutriment of the body.

There are various ways, by which mortification, can be produced, with out the presence of inflamation, such as ossification of the arterial trunk, that supplies any part of the body, where by the blood can not circulate, in it, producing gangrene senilis, or old mans gangrene: it may be produced, by the strangulation, of an intestine, it is produced, often by eating diseased grain, for food, spurred, rye particularly;

In speaking of inflamation, we should mention the fact, It has on the constitution: no one can have inflamation, with out irritation, which will

the constitution, in a more or less degree, according to the intensity, which exhibits itself, either in general or local symptoms.

If the inflammation, is sufficient to disturb the constitution, it is productive of fever, which obtains its name, according to the organ that is affected, as inflammation of the stomach, is called gastritis, and the fever accompanying gastric fever.

The fever that is present, is called inflammatory, which is marked by chillness, debility, increased frequency, and force, with hardness of the pulse, the heat of the skin is augmented, and a derangement of the functions of the system ensues, in a more or less degree.

There are certain symptoms, which are characteristic, of the setting in of inflammatory action, or fever, such as debility, thirst, loss of apetite, headache, with confusion of the intellectual faculties.

We always find, that the fever follows the inflamation, therefore we conclude that it is the consequence, of the inflamatory action brought on, by the altered condition of the blood, that is circulating through the system, by having its amount of fibrin, increased which is perceived, by the abstraction of blood, from the arm, of an inflamatory patient, which is manifested by a serum that appears, on its surface, denominated, the buffy coat.

The duration of inflamatory fever, is various, it may persist, for a number of days and again it may abate, very suddenly.

The formation of pus, is marked by rigors, and a continuance of the perspiration, followed by hectic fever, which is recognised, by increased frequency of pulse, a succession of cold, and hot stages of the surface, with shivering of the face.

profuse perspiration, wasting of the body, by degrees, general debility, becomes manifest and the patient, sinks with a complete loss, of vital energy.

There are several varieties of inflamation, as before stated, that do not differ in kind but in intensity and degree, as the acute, sub acute, chronic, active and, passive.

Inflamation is said, to be acute, when it runs its course rapidly, producing great local, and constitutional disturbance, and chronic, when it is but little with very little constitutional irritation, the duration is longer, the changes take place slower, one after the other.

The acute, is not necessarily the most dangerous, on account of the violence of its symptoms, but it is most subservient to remedies, and easier controled, while the chronic is often very obstinate, producing great mischief, in the parts of

-fected. The chronic is generally a con-sequence of the acute, and as they only differ in degree, one may sink into the other, or on the other hand, the chronic, may be lighted up into the ~~other~~ acute.
The subacute form, is intermediate between the acute and chronic, productive of very little pain and is easily controlled.
The active form, is when the neighbouring vessels of the part sympathise, with those concerned in the inflamation, producing more or less constitutional disturbance, which differs, very little from the acute form.
The passive is when the inflamation, seems to be languid, and sluggish, nearly iden-tical, with the chronic form.
Sometimes it is latent which is a term applied to it, when it runs its course clandestinely, with out the usual warning, given by nature of the encroach-ment upon her rights.

It is often called specific, which has reference to its kind, as in measles, scarlatina, and smallpox.

Having spoken of inflamation, its causes, symptoms, terminations, events, forms, kinds, and degrees, it behoves us to institute, a treatment for it, in its various stages.

The treatment, for any deseased condition, of the body, should be the simplest, and best adapted to the case, to which it is applied.

In treating inflamation, we should first remove the exciting cause, although generally it has produced, the mischief, before it comes under our notice so we must remove it, as far as it is in our power, and endeavour to diminish, the existing, inflamating action, which can be done, by resorting to what is called, by the votaries, of the healing art, Antiphlogistic treatment, being a phrase

derived from two greek words, Αντι against and Φλεγω to burn, which according to its meaning, should be a prophylactic treatment or regimen.

Antiphlogistic regimen consists, in restricting the patient to proper diet, blood-letting, purgatives, mercury, antimony, digatalis, colchicum, opium and its salts local remedies, heat and cold externally, and counter irratation.

In the first stage of inflammation, the diet of the patient, must be very simple, permit him to have no animal food, or to partake of any thing, that is likely to excite him, if the inflammation is severe, we may practice blood-letting, either general or local, and we must bleed, for a certain effect, not to obtain a certain amount of blood.

If bloodletting is practised, in the first stage, and carried, to a sufficient extent

its generally controls, or renders it subservient, to our antiphlogistic remedies.

In external inflamation, with a view to produce resolution, we must use cold applications, which are productive of great goods, they act as astringents, by condencing the muscular fibre, and surrounding tissues, which cause them, to press on the engorged capillaries, and thus assisting them, to relieve themselves, by forcing the stagnant blood, on and establishing the healthy circulations, which is decidedly, the most favourable termination, of the inflamatory action.

But if we can not bring about resolution, we must take the next best step, and produce a good suppuration, in doing it we can call the application, of warmth and moisture, to our assistance, which will produce relaxation, of the integuments, that are so distended by the of

-fusion, that has taken place, and which is production of great pain, the warmth and moisture will ease the pain, and assist in the formation of pus, soften the surrounding tissues, and promote its approach, to the surface, which it has a natural tendency to do, it is ether incised by the surgeon, or ulcerative absorption takes place, and the wound heals by granulation.

The effect of bleeding, when employed unnecessarily, is apparent by the conjestion, and dropsies, it is liable to produce. When it is carried to a great extent, it produces syncope or fainting which is caused by the stimulus of the heart being withdrawn from it, and the depressing effect, that is transmitted, from the brain, on account of it being deprived, or its proper amount of arterial blood.

The advantage that is derived from blood letting, is the effect it has on the circulatory system, the amount of the vital fluid is diminished, the action of the heart is not so great, on account of the deficiently of its stimulus, and the engorged capillaries, have an opportunity to relieve themselves.
Sometimes it is necessary to bleed, a second time, on account of the reaction, that takes place after the first.
To produce an effect, on the system bordering on syncope, you must bleed with the patient standing and let the blood flow from a large orifice, and as a general rule you may depute, untill the lips are slightly pale, a little sighing, some nausea, and slight fluttering of the pulse, or untill the pain is relieved.
Some persons bear the abstraction of,

blood, better than others, which varies according to the age, sex, or temperment; a previous healthy person, will generally faint, by the loss of fifteen ounces of blood, but when labouring under a severe inflamatory attack, he will often bear double that amount.

Venesection is generally preformed in the bend of the arm, or in the neck, some times in the temporal artery, but this is called Arteriotomy.

Local bleeding, is practised when the inflamatory action, is trifling or when the vital powers, are nearly exausted, and in old age, where a general bleeding would prove fatal.

In cupping we have a general and local bleeding combined, we use leaches because we can apply them where we can not cups.

We use purgatives because they produce

an increase mucus exhalation, from the alimentary canal, they have a derivative effect, and counteract, the assimulation of Nutrition, and produce absorption.

There are other medicines, that are very usefull in the onset of the inflamatory action, as Emetics, Diaphoretics, and Diuretics by emptying the stomach, and producing perspiration. Tartrate of Antimony and Potass., is one of our greatest agents.

Mercury is generally known as a cathartic, but in inflamation when gradually introduced, in to the system, it produces a tonic effect, on the minute lymphatics, and Bloodvessels and promotes, the absorption of any effusion, that has taken place.

Opium is usefull, when combined, with any mercurial preparation, after venesection has been practised, by relieving pain, soothing the nervous system, and preventing reaction.

Nitrate of Silver, and Iodine, are very often required, the former possessing antiphlogistic properties, as well as caustic. Counter irritation is often employed, with good effects, by means of dry cupping, blisters, setons, issues, caustic, and often the actual cautery, thereby causing an increased flow of blood to the part they are applied, and to lessen the seat of the inflammation, producing a revulsive effects. But if by all these means, we are not able to stay the progress of the inflammation, in mouth and in pharynx, and sphacelus, or mortification, which is the second or last termination, is about to come on, [illegible] to its support, the constitution, and nature will resort to the best remedies, for her relief, by establishing a line of demarkation, and what she would do, this is generally anticipated, by the surgeon, and now the cessation of inflammation, is in the [illegible] of the part, or the patients life, the inflammation runs its entire course.

A
Clinical Report
of
Six Cases,
Submitted
For, the Examination
of the Provost, Regents
and Faculty of Physics
of the University of
Maryland,
For the
Degree of Doctor of
Medicine, By,

Walter B. Lent
of St. Marys County
Maryland

March 1st
A.D. 1852

Case of Dysentery

Edward Tremor - Aged 22 years.

Admitted in the Baltimore Infirmary July 7th - AD 1851. For the last twelve months he has been working in the Baltimore Cemetery. Taken sick after drinking a large glass of beer on Tuesday last - with vomiting, and looseness of the bowels. Has been seven days sick. His bowels have been moved nearly twice every two hours. Stools composed principally of water, with a little blood. On the following day, his stools became more bloody - accompanied with much tenesmus and tormina. His bowels continued loose - and evacuations composed of blood and water up to the present time. Yesterday he passed not so much blood as heretofore, but a great deal of mucus. Yesterday he took

some oil. When admitted his condition was as follows. Pulse 90 with much sharpness and fulness. Great tenderness over the epigastric region. Great pain in the head. Urine diminished in quantity and very high colored. Bowels moved fifteen times in the last 24 hours. evacuations composed of mucus, tinged with blood. very small in quantity. attended with much straining. Tongue covered with a yellowish fur. Ordered to take ℥xiv of blood from the arm. ℞. Blue Mass. grs xv — Opium gr iss — Ipecac grs ij. Made into 5 pills one to be taken every 3 hours. July 8th condition about the same as yesterday. pain in the head much diminished. pulse about the same. as also stools which are attended with great pain. The

pills composed of Blue Mass, Opium and Ipecac, was ordered to be stopped this morning. And ordered to take the following. ℞. Calomel grs viij. Opium grs ij. Ipecac gr j. to be given at once. and in eight hours afterwards, if it does not produce faecal evacuations - give Castor oil ℥iij. and if the bowels are too freely moved give gtts x of Laudanum after each operation except the first. Ordered to be bled again to the amount of ℥vj. July 9th condition as follows. Pulse 80 full, and strong. Epigastrium still tender. very little pain in the head. Stools very frequent. about once in two hours. but not attended with so much tormina and tenesmus as yesterday. Did not sleep much last night. Ordered to take Compound Chalk mixture, one Table spoonful.

after each operation with gtts v of Laudanum - Mustard plaster to the epigastrium - July 10th Better this morning - slept pretty well last night - Complains of no pain over the epigastrium - Pulse 75 - Stools not so frequent - only once in 24 hours - no blood but mucus - Ordered to continue the compound Chalk mixture after each operation - July 11th Still growing better - Slept very well last night - Bowels moved only once during the night - The evacuations are nearly natural - Pulse natural - Ordered to continue the Chalk mixture - July 12th Doing very well - Stools moved twice in the last 24 hours - and natural in consistence and all other respects - Ordd to continue treatment - July 13th She is convalescent - And on the 14th of July was discharged from the house entirely well.

Case of Delirium Tremens

Samuel Hall, Aged 40 years

Admitted in the Baltimore Infirmary July 5th AD 1852 Of intemperate habits For the last month, has been drinking very freely. On Tuesday last (July 1st) Symptoms of Delirium Tremens first set in, having a great deal of tremor of the hands. On this day (July 1st) he took a dose of salts, which operated freely. July 2nd On Wednesday night he became very delirious, and his stomach irritable, vomiting, every thing, he eat, or drank. On Thursday (July 3rd) had three convulsions and on the following day (July 4th) had another. Up to the time of his admission, has had no sleep and constantly delirious. When admitted, his condition, was as follows.

Pulse 130- and very weak,- Much tremulousness and delirium,- Imag-ining he has a vast quantity, of money, hanging about his clothes. He also thinks, that there are many devils, flying about his room,- Stomach, at present, not irritable- though there is some slight amou-nt of tenderness, over the Epigastric region,- No great heat about the he-ad,- Eyes milky, and injected, He was attended by a Physician, before coming in the house, who gave him opium pills, (as we learnt from his friends, that came with him) When admitted, was Order-ed, R. 40 gtts. of the Tincture of Opium. - to be followed in two hours by 40-gtts more, if sleep was not produced by the first dose.- And if the second dose did not have the desired effect,

- to be repeated in two hours by 30 gtts more, which was found necessary to give him. July 6th He slept none last night — very restless throughout the whole night — condition, about the same, as yesterday — Pulse 120, and very weak — Ordered ℥j of brandy every two hours — with XV gtts of Laudanum, and at 10 O'clock — was ordered to stop the brandy and Laudanum — and take the following — ℞ Chloroform ℥ss in mucilage — to be followed in two hours by ℥j if no unpleasant results came on, which alleviated the symptoms in some degree but did not produce sleep — In the evening of the same day (July 6th) it was ordered ℥j more of Chloroform, — and if it did not have the desired effect — and no unpleasant symptoms came on, to be followed in two hours, by ℥ij — Which was given him, — After taking the last

dose, he became very drowsy - and at length fell asleep and slept for six hours.

July 7th Condition, a little better this morning - but still slightly delirious, although he is very quiet. - Pulse 100 - He was prevailed upon to take some arrow root with a little brandy this morning - Ordered ℥j of Chloroform - which he took - and had the desired effect. it produced sleep for some hours - but when he awoke the delirium was still present. He took ℥j more of chloroform, - which produced profound sleep until the morning of July 8th He awoke a great deal better - Free of delirium and quite rational. - Pulse 76 - Bowels costive. Ordered ℥ss of Castor oil, & ℥j of brandy - which acted well. He complains of no uneasiness whatever. Ordered to take ℥ss of Chloroform if he became delirious.

July 9th He slept very well last night. all symptoms of Delirium Tremens, have

subsided, and is in every respect quite well, being the fourth day after his admission. July 10th He is not so well this morning, slept but little last night, being disturbed by a sick person who was in the same room, In the evening of the same day he became slightly delirious. Ordered Tincture of Opium 40 gtts Brandy ℥j which releived him.

July 11th He slept well last night, this morning he is in every respect quite well.

July 12th Condition, that of a healthy Man. He left the Baltimore Infirmary to day very well.

Case of Meningitis

Willard Florence — Aged 18 years — Admitted in the Baltimore Infirmary, July 8th A.D 1852 — One month and three days, before coming here. He was struck on the left side of the head, by a board — But did not suffer any inconvenience from the blow, except an occasional head-ache — as also an unsightly bruise, about the eye, — He was in New Jersey, when this blow was inflicted, immediately after which, he came to Baltimore, And has been engaged since in the Stage Rooms of this place. He entered the Infirmary on July 8th — Up to the 5th of July — before coming in the House, His health was pretty good — On July 5th, He complained of more or less headache, but continued at work — July 6th still complained of headache — but of nothing else. July 7th His headache was

do some, as to compel him to give up work, and send for a Physician. Who bled him copiously and gave him some purgative medicine, which operated freely. Pain was a little diminished after bleeding and purging. On July 8th about 10 O'clock in the morning, he became suddenly deranged. He came to the Infirmary about 11 O'clock of the same day. Raving, and insensible. There was a good deal of wildness about the Eyes. He was screaming, whistling, and making all sorts of odd noises. Pulse 60 small and compressible. Respiration 30. No heat about the head but some slight degree of coldness. Taking into consideration his treatment before coming to the Infirmary, 6 cups were ordered to be applied to the back of the neck,

— and Mustard plasters to the Ankles
— ℞ Calomel grs x — July 9th He
is much the same as yesterday — did
not sleep any last night, but conti
-nued raving, and screaming, thro-
ughout the night, — and required
three or four persons to keep him
down in bed — passes his urine freely
in bed — Is stronger on the left side
than on the right — The left being the
side on which he was struck — No
very perceptible marks of paralysis —
Only a very slight diminution of str-
-gth on the right side. We were obli
ged to bind him down in bed — Pulse
72 — small, and compressible — No ex-
-tra heat of surface any where —
Ordered ℥ viij of blood to be taken from
the arm — and ℞ grs x of Calomel — but
not getting him to swallow, the
dose was repeated — But failing

-in our second attempt, to get him to swallow the calomel. He was Ordered, ℞. gtt. jss of Croton oil - which was to be rubed up with a little butter and given him - If these means fail to operate, - He was ord.: to have injections - until an evacuation, from the bowels, was produced - Ord.: Mustard plasters to the Extremities - and ice to the head -

July 10th. He is rather better this morning - But passed a very bad night, - The croton oil acted well, on the bowels, yesterday evening - He continued raving, and was delirious, and unintelligent to every thing about him - Throwing himself from one side of the bed to the other, throughout the whole night, - So as to be necessary, to bind him, down in bed, But this morning, he is

-better— Pulse 72, and soft— He is very quiet— Slept this morning, for the first time, since he has been in the House— Answers intelligently when spoken to— Complains of great pain in the head— He takes his medicine readily— asks for, and drinks water— And obeys any commands given him— Is entirely rational— Ordered, the following—

℞ Hyd, Mass,-grs xiv } Fit Pulv.
-Ipecacuanha,-grs iv } viij— one
Nitr, Pot - ℈ij } to be taken

every 2 hours— If the bowels are moved too much— check them with Chalk mixture— without the addition of laudanum;— If fever rise this afternoon, and general excitability of the system, Apply 4 cups to the back of the neck, ℥ij of blood to be taken— Ice to the head, and sinapisms, to the extremities—

-which was done - July 11th Condition about the same as yesterday - Has been rational, and quiet, since yesterday morning, - Slept well last night, - And has slept, much to day - Is rather in a drowsy state - Pulse 80 - ful, but compressible - He complains only of his head - The treatment of yesterday, was slightly changed to day - ℞ The following

| | | |
|---|---|---|
| Hyd, Mass - | grs viij | Make |
| Ipecac, — | grs iv | into 8 - |
| Nitr, Pot - | ʒ ß | powders, |

one to be taken every 2 hours. -

If the bowels are moved too much, check them with Chalk Mixture without the addition of laudanum. - Blister was applied to the back of the neck - which received him in a great measure - July 12th Much better this morning - Slept -

well last night - Skin pleasant -
- Pulse 72 and soft - as also regular
- Is longing much for food, to day,
for the first time, since he has
been in the house - Bowels rath-
-er costive - was ordered the fol-
-lowing ℞ Sulph: Magne. - ʒj
To be taken { Calcin: Magne. - ʒss
at once - And if it does not
operate in 3 hours, give an inje-
-ction - And also continue
the other treatment -
July 13th He is still improve-
-ing - The Powders of Blue Mass.
Ipecac, and Nitrate of Pottash, was
Ordered to be given every 8; instead
of every 2 hours - Bowels regular -
Pulse natural, Complains of no
pain whatever -
July 14th Much better this morni
ng. Pulse Natural - Bowels regular

— And is in every respect doing well — Powders of Blue Mass, Ipecac, and Nitrate of Pottash was Ordered to be stoped to day — for the first time — Castor oil when necessary to regulate the bowels, — All other treatment discontinued —

July 15th He is in every respect quite well, walking all about the house —

And on July 16th He left the Infirmary — perfectly well. Being the eighth day after his Admission —

Case of Pneumonia

Edwin Mulrads — Aged 23 years — Admitted in the Baltimore Infirmary — October 15th A.D. 1851. A native of Ireland — His occupation, is that of a barkeeper, which he has followed for some time, — Occasionally, he indulges in drinking to excess — On Thursday morning — October 9th, which was six days ago — He was taken sick after exposure, with shiverings — followed by flushes of heat — as also fever — Has a short, and dry, cough — Pain in the breast, above the right nipple — On the following day October 10th His breathing became hurried — Cough, and Fever, continuing — has much oppression, about his chest — and feeling of general prostration.

The symptoms above detailed, were still present, on the day of his

Admission— The day before he entered the Infirmary, (which was Oct 6th 14th) — He says that he expectorated dark looking sputa— Cough from the onset has been short and dry— Was attended by a Physician before coming here, who applied a blister, over the Sternum, and also slightly ptyalised him— When admitted in the house, his condition, was as follows— Skin hot,— Pulse 130 and firm,— Respiration 44, in a minute,— No pain, in taking a deep breath,— Has a feeling of oppression, about the right side of the Thorax,— Cough improved, and short. Has had as yet no expectoration since admission Bowels moved this morning.— Tongue furred— Gums are slightly sore— Mind confused. Ordered Venesection, in the sitting posture, from a large orifice,—

Flax-seed tea - ad libitum - and take the following - ℞ Calomel - grs viij,
Ipecac. grs viij
Nit. Potass grs 40
to be made into 8 powders - Dose - one every two hours - And also Tart. Emetic grs j - Aqua ℥j - Dose Tea spoonful - every hour between the Powders -

Physical Signs:- Complete dulness over the right lung - posteriorly - Incr-creased vocal thrill - Bronchial voi-ce - as also bronchial respiration - Some fine crepitation, towards the base of the right lung - The left lung bein-g unaffected - October 16th Conditi-on about the same as yesterday - Was delirious last night - He slept none during the night - Pulse 120 - and easily compressed - Tongue covered with a brownish fur - Much sordes about the teeth - Has exp-

-ectorated some rusty sputa. This morning- He vomits a little this morning- Forehead covered with perspiration- Was bled yesterday to the amount of ℥ xvj- stopping on account of the flagging of the pulse - His bowels have not been moved since yesterday morning- Ordered Flaxseed enema- And continue other treatment- of Calomel- Ipecac- and Nitr Potap- Octbr 16th 6 Oclock in the evening- No change since morning- Mind very anxious and flighty- has not slept any to day- and very little in the last two or three nights- Ordd Pulv- Doveri grs x at night. October 17th Slept- pretty well last night- Bowels moved twice since the injection was administered - Pulse 120 irritable and easily compressed- Respiration 38- very little

- aind on taking a deep inspiration.
Mouth quite sore. Ordered Pulv Dov-
-eri grs x at bed time. And omit-
the powders (composed of calomel, Ipe
-cac. and Ant Tetap. But continue
with Tart Emetic. 1/8gr every two hours
Physical Signs: - very little dulness
over the right lung. Crepitation return
-ing. being now quite abundant.
October 18th 11 Condition much better
to day. Slept well last night. Mind
quite rational. Pulse 100. and
compressible. Respiration 32. Skin
Moist. Bowels regular.
October 19th 11 Condition about the
same as yesterday.
October 20th 11 Still improveing.
Pulse 85. Skin pleasant. Bowels reg
-ular. complains of no pain. Appe-
tite good. 22nd 11 Stop Tart-Emetic and
other remedies. and Rx Tinct Ch.

-yrth as a mouth wash- October 21st

He is doing well- All dulness has disappeared- and is in every respect- quite well- Pulse natural- Bow- -els regular- complains of no pain about the Chest-

October 22nd Still Convalescent- and on the 26th of October the pa- -tient left the Infirmary perfect- -ly well-

Case of Typoid Fever.

Mrs Vonehardt— Admitted in the Baltimore Infirmary— October 21st AD 1851— Aged 39 years— Is a native of Germany— Has been four years in this Country— She speaks but little English— She resides on Gallows Hill beyond Baltimore— Four weeks ago her husband died of fever (what kind of fever we could not ascertain) Whom she nursed during his entire illness— We learned from her friends that she was taken sick shortly after her husband died with fever very similar in character with that of which he died— Has had much stupor since first taken sick— and great tendency to diarrhoea— She is occasionally delirious at night

- Has had no Epistaxis since taken sick. - When admitted, - (which was on the 21st of October) She - presented the following symptoms: - Pulse 120 and compressible, - Stupor, almost incessant, - Mind listless, and confused, - Cheeks of a dusky, red hue; - Tongue very dry, brownish, stiff, and glazed - Much Sordes, collected about the teeth - Lips dry, brown, and very stiff; - Bowels very loose - She passes her stools in bed. - Has slight cough - Abdomen tympanitic - No perceptible signs of tenderness over the Abdomen - Gurgling in the right iliac region - Rose spots, very abundant, over the chest and abdomen - Has slight subsultus tendinum - Ordered -

Neutral mixture. (℞ - Citrate Potap. - ʒj - Aqua ℥vj - Dose table spoonful every hour or two -) She was also Ordered - ℞ Compound Chalk mixture - One Table Spoonful after each operation - Surface to be sponged, with cold vinegar and water.

October 22nd Condition about the same as yesterday - Did not sleep much last night - She was a little delirious during the night - Pulse 115 - and compressible - Bowels not so loose to day, as they were yesterday - Urine very scanty, and high colored. Tongue a little moist - but still coated with a brownish fur - Rose spots still abundant - Ordd Add ʒss. of the Sweet Spts. Nitre - to each dose of the Neutral mixture - And go on with the other treatment, Octbr 23rd

a little better this morning - She slept some last night - Pulse 110 - and weak - Tongue moist, and cleaning - Not much Sordes about the teeth - Bowels moved only twice in the last 24 hours - Stupor still continues. Ordered. Continue treatment.

October, 24th Condition, about the same as yesterday - Ordn. To continue, with the same treatment. - October 25th - Better this morning - She slept pretty well, last night - Pulse 108 - and weak - Bowels moved, twice in the last 24 hours. Tongue, moist and clean - Still, much stupor - Rose spots fading - Answers, but imperfectly when spoken to.

Ordered. To continue treatment. - October 26th Condition, -

- a little better this morning - She slept - pretty well last night - Pulse - 102 and weak - Bowels moved once in the last - 24 hours - Not - so much Stupor this morning as heretofore - Rose spots nearly disappeared - Ordered. Stop the Chalk Mixture - but - continue with the Neutral mixture - and give Wine Whey - October 27th Still very weak - but Condition in all other respects - better - Her Mind is improve - ing - Ordered. To continue the Wine Whey - which was freely given during the day yesterday

October 28th She is slowly imp - roving - Pulse 95: and firmer - Mind clearer - Bowels regular Ordered. To stop all treatment. Excep - t the Wine Whey - which - must - be given three times a day -

October 29th She is still improv-
-ing. Complains of nothing. except
weakness. Ordered To continue with
the Wine whey.
October 30th Doing well.
October 31st Still improveing
November 10th Has been gradu-
-ally improveing since last
date. And on November 18th
She left the Infirmary entire
-ly recovered.

Case of Bright's Disease

Mr Francis Savin - Aged 25 years -
Admitted in the Baltimore Infirma-
-ry November 27th A.D. 1851 - a Laborer
~~by trade~~. Is a Native of Ireland.
He has been twelve months in this
country - during which time he
has been living near Harpers Ferry.
None of his family have died of
Phthisis - Habits not intemperate
though he drinks ardent spirits
occasionally - three years ago he had
syphilis - and several years before
this first attack - he also had the
same disease - for which he was
salivated. Never had Rheumatism.
One year before coming to this
country he complained of some
slight pain in the lower part
of his back and at the same
time he had oedema of the lower

extremities, for the first time his health previous to this time, was pretty good; He still complains of some pain, in the lower part of his back, And the Oedema has been more or less constant since he first noticed it, in the lower extremities. In June last he had Intermittent Fever, and at the same time his legs, and Abdomen, became very much swelled. he was attended by a Physician, and was so far relieved as to be able to attend to his work. In September last his legs and Abdomen again became dropsical, but he continued at his work, up to the middle of October last, when he was obliged to lay by. And since this time he has been getting worse,—

within the present month (November) he observed his face and hands to be oedematous at times, - two weeks ago his scrotum became very much distended, - and has had cough for the last month. - The pains in the lower part of his back has been more or less present ever since first taken sick, - his Urine also - has been scanty and high colored, since he had Intermittent Fever.

On the day of his admission in the Infirmary, (Nov^ber 27th) his condition was as follows, - Pulse 100 and soft. Respiration 28. Tongue slightly furred; complains of pain in the lower part of his back - has some difficulty of breathing, - has passed but little urine in the last twenty four hours, - his bowels have not been moved to day, - surface

very pale,- No yellow tinge about the eyes,- his Abdomen is very much distended; As also much oedema in the upper and lower extremities,- Sounds of the heart natural, There is no abnormal physical signs,- Ordered R. Bi Tartrate of Potass. Ea. ad libitum.- November 28th His condition about the same as yesterday- Slept but little during the night,- complains of some headache as also pains across the kidneys,- Pulse 106 and soft- Respiration 30 in a minute,- Bowels moved freely, five or six times since yesterday. stools very watery. Ordered to continue Cremor Tartar tea.- his Scrotum, which is very much distended, was ordd to be punctured, Urine was tested this morning-

by heat, and Nitric Acid, and was found to contain a large quantity of Albumen,

Nov^br 29^th Condition about the same as yesterday, Urine more abundant, but still very high colored. Ord^rd continue treatment, and R Pulv Doveri grs x at bed time, urine was again examined this morning, by the same tests, and was still found to contain a large quantity of albumen.-

Nov^br 30^th He feels better this morning. Slept well last night. Pulse 108. Respiration 28. Tongue still slightly furred. Scrotum diminished in size but yet much distended. bowels moved several times since yesterday, stools very watery. complains of

pain across the upper part of the abdomen. and has some difficulty of breathing. Urine still contains a large quantity of Albumen, Much paleness about the face.
Ordr. ℞ Syr. Iod. Ferri qtts x. ter die.
Scrotum to be repunctured; and continue other treatment.
December 1st. Condition about the same as yesterday. Slept pretty well last night; ascites appears to be increasing. has great difficulty in breathing. complains of pain across the epigastric region. Pulse 110 small and weak, Respiration 30. Tongue furred. Bowels moved four times during the night. Stools watery. Urine more abundant and contains a large quantity of Albumen. Scrotum much diminished in size. Much oedema about the upper

and lower extremities - Ord^rd Pr Gin toddy - and continue other treatment.
Dec^br 2^nd Slept none last night, - bowels moved very often during yesterday, and also last night - Acites is increasing. condition otherwise is the same as yesterday - Ord^rd stop Bi Tartrate of Potass. - and Pr Chalk mixture. Go on with Gin toddy
Dec^br 3^rd He slept none last night although repeated Dovers powders was given him: complains of great weakness - Bowels not so loose, condition in other respects the same as yesterday - Ord^rd continue treatment.
Dec^br 4^th Worse this morning, - Slept but very little last night - Pulse 100 and very weak - Respiration short and quick and performed with great difficulty - complains of weakness, and great pain over the epigastric region, urine

very albuminous - bowels very loose and watery - Ordered ℞.

Blue Mass - grs x vj

Pulv Doveri grs x vj

Pulv Scilla grs iv ~~m~~ ℞ - into 8 powders - take one ter die, go on with other treatment - Pulv Doveri grs x at bed time

Dec^{ber} 4^{th} 6 O'Clock, P.M. He is very weak - has extreme difficulty of treathing, Pulse very weak - hardly perceptible - slightly delirious this afternoon - and at 2 O'Clock in the morning of December 5^{th} He departed this life.

Post Mortem Appearances.

Head not examined. Heart and Lungs natural; some degree of Hydrothorax - as also Hydropericardium.

Abdomen about three gallons -

of serous fluid, was found in the abdominal cavity.

Liver, somewhat enlarged, and of a dusky hue.- Spleen, was also much enlarged.-

Kidneys, were much hypertrophied. The cut surfaces presenting a granular appearance, and of a mottled hue,- having the sensation of greasiness to the touch. And having all the characteristics of Bright's Disease of the Kidneys.

# An Inaugural Dissertation

upon

## Inflammation

Submitted to the Examination of the

## Provost Regents and Faculty of Physic

of the

## University of Vermont

For the

Degree of Doctor of Medicine

By

Edmund P. Sargeant
Vail County
Vermont.

November 1852

will wonder at their own ignorance and folly.

W[illegible]

ute the more responsible duty, and shall attempt to describe the Nature, Terminations, Conditions & Treatment of Inflammation.

[illegible]

at least in importance to the [illegible] and it is the starting point of many diseases, liable to attack all parts of the System and one we meet with at almost every turn — An ignorance of which [illegible] to the Physician [illegible] bring him to master many symptoms, [illegible]

Inflammation is a disease of the Capillaries, and seems to be a morbid and irregular action together with an altered condition of nutrition [illegible] change [illegible]

[illegible] the [illegible] system [illegible]

...
flammation is most apt to attack mucous
[illegible] and serous membranes because of
their increased vascularity. The Physiology
of Inflammation consists of more blood
entering the arteries [illegible],
[illegible] of the veins [illegible] can be [illegible]
as in health [illegible] in activity
inflamed, and from this [illegible] the [illegible]
which have been [illegible] debilitated [illegible]
irritation, become distended, and [illegible]
performing their [illegible] action the [illegible] of the
blood is considerably increased [illegible]
[illegible] and distended, constitute a [illegible]
gestion. This continued [illegible]
[illegible] is set up [illegible]
to adhere [illegible]
quantity of blood [illegible]
[illegible] But
is there any [illegible]

The different terminations of [illegible]
Resolution, Erosion, Haemorrhage, Suppuration, Induration
Softening, Mortification, Ulceration. [illegible]
cribe those which most frequently occur.

The first of these Resolution is the [illegible]
of all the Terminations and most [illegible]
the Physician and Surgeon [illegible]
[illegible]. Thus, the Pain abates the [illegible]
[illegible], the [illegible] the [illegible]
[illegible] and the fever which is [illegible]
until in a short time the Part regains their natural
sensations and again [illegible] the [illegible] of
health — this is Resolution. But the [illegible]
causes may still exist, [illegible]
been so great that means adopted to cure have failed,
and the symptoms are aggravated, the Pain is
now of a throbbing kind, the [illegible]
[illegible] whitish [illegible]
a distinct [illegible] is [illegible]
a yellow creamy discharge [illegible]

[illegible]

to the Constitution a habit as Suppuration is taking place; but this may not always be the case, the discharge may be very profuse, chills frequent and frequent, followed by flushes of heat, ending in perspiration [illegible] the nervous Energy of the patient to which is applied the term Hectic Fever: [illegible] which takes place as the effusion of Serum in Pleuritis, also Blood is frequently found out from the [illegible] is [illegible] the [illegible] either Mortification [illegible] yellow [illegible] out strength to [illegible] seldom so intense as to cause the death of a part unless the function of the part has been [illegible] [illegible]

[illegible]

[illegible]

by many renowned Surgeons "Inflamatio Debilis".
When this result of Inflamation happens you [illegible]
The [illegible] [illegible] [illegible] its [illegible]
a purplish hue. indeed a greenish black color: the
skin seems to be [illegible] [illegible] [illegible]
[illegible], the [illegible] [illegible] [illegible]
tient to expect from the touch, [illegible]
crepitation from air [illegible]
exhaling a nasty [illegible] odor. [illegible]
till a line of demarcation is formed, [illegible]
mortification is arrested. [illegible]
[illegible]
and the surface covered by granulations from the
process of Ulceration. [illegible] the Constitution [illegible]
to sympathize. The attendant [illegible]
musings of the delirious and [illegible]
[illegible], [illegible]
table pulse. the shrunken, haggard, ghastly,
[illegible]
[illegible]

swelling, which is lymph; while at the circum-
ference we have serum & fluid, out, and as sup-
puration proceeds we have pus from the pointed
and soft center, which is diagnostic of the inflamma-
tion and if lymph it is evident we are then assured
that until, has been in that particular region,
it frequently remaining after that [illegible].
Most pain another sign but not [illegible]
and is greatly modified by the seat of the inflamma-
tion — thus the pain of mucous membranes
differ greatly from serous membranes and
of the nerves from that of [illegible]. The
pain of the former is of a burning, stinging pain,
while in that of the serous structures it is [illegible]
cutting and extremely acute [illegible]
the nerves it is [illegible], being a [illegible]
darting pain, very severe. The pain in inflamma-
tion is dependent upon the [illegible] and tension [illegible]
upon and if the nerves are [illegible].

Case —— A gentleman [illegible]

[illegible] several days before, over one of the metatarsal phalangeal articulations a small degree of heat and much redness together with swelling in a [illegible] marked, inflammation yet pain was not complained of and seemed to be inconsiderable, yet we think there must have been a slight degree of soreness — however the symptoms were all relieved in a day or two by cold applications and the bandage.

Having run over the symptoms we will next consider [illegible] being the [illegible] [illegible] studying it in health; examining the pulse of [illegible] in health, viz.,

| | | |
|---|---|---|
| From birth to one year | | 110 to 115, |
| " one year to two years | | 90 to 105, |
| " two years to three | " | 98 to 108, |

that tact should not be considered a guide although an important standard, as many influences tend to change the pulse — and position, posture, climate, exertion, all exert an influence. It is true a pulse of 120 denotes disease, yet the force and nature not the frequency should be considered, — thus a hard intense pulse denotes inflammation while a full, soft, wave-like pulse is one of health. A sharp jerking pulse in inflammation of serous membranes. The trembling in derangement of the heart, and last a kind of thrilling pulse in [illegible] of the brain. These may aid, at times, in forming a diagnosis but should never decide.

And in haemorrhage we have a quick strong pulse in consequence of the heart trying to make [illegible]

[illegible]

pronounced and though [illegible] would indicate means to reduce it and the [illegible] of this blood letting [illegible]

[illegible]

[illegible]

quick strong pulse.

The human system contains within it the seeds of disease [illegible] the Causes to set them into successful [illegible] action. [illegible] are Predisposing [illegible].

The [illegible] either transmitted [illegible] [illegible] [illegible] [illegible].

[illegible] the heart [illegible] [illegible] [illegible] state of fever, [illegible] [illegible] the weakening [illegible] [illegible] induce Inflammation [illegible].

Exciting are Exposure to cold, a chemical [illegible], an insufficient amount [illegible] [illegible] [illegible] suddenly [illegible] [illegible] [illegible] mustard, Mineral Acids, and Cantharides [illegible] direct [illegible].

The Diagnosis of Inflammation.

[illegible]

be worse than useless to attempt any means of alleviation while the irritating cause [illegible] ists, or while the foreign substance still remained in the wounded part, still keeping up a stage of irritation bordering upon Inflammation — hence in all injuries, wounds or what not, in which the [illegible] parts are implicated, it should be the first duty of the Surgeon to search [illegible] and [illegible] [illegible] [illegible] for the cause [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] if this should happen [illegible] [illegible] [illegible] the [illegible] in the [illegible] [illegible] [illegible] the Patients [illegible] [illegible] [illegible] the [illegible] in the proper performance of their functions [illegible] [illegible] [illegible] [illegible] enjoined upon the Patient, together [illegible] [illegible] [illegible] [illegible] [illegible] the common salt, acid, water, the acetate [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

also a solution of the sulphate of copper, [illegible] tures have all been used, with advantage.

Poultices are useful, but more particularly in those cases of great inflammation, where the adhesive process has been interfered with and you wish to promote suppuration; then it is that the genial warmth [illegible] pleasure to the patient which soon relieves the great pain and soon, by promoting the pointing as in a common [illegible].

But perhaps Revulsives are the most important external means for subduing inflammation, for inst., in cases of internal in[illegible]

[illegible]

the external surface; but they should
be applied [illegible] near the [illegible]
acute disease and never till its [illegible]
has been subdued by various anti-
phlogistic measures; perhaps [illegible]
in chronic inflammations and towards the
decline of those which are acute, the
great physician [illegible] in active inflam[illegible]
or while it is at its height [illegible] the [illegible]
increase of the general [illegible]. [illegible]
however, in thoracic inflammation, and
to the belly in abdominal inflammation,
blisters are not only frequently [illegible]
often, but of the greatest [illegible]
to cut short the disease as if by a
magic spell produced by some myster-
ious and unknown hand upon that [illegible]
[illegible] disease. [illegible]
the enemy of the physician. They should
however be very cautiously used as bad results to

sometimes take place in some conditions; thus we know a case where the application of a blister to an injury received at the ankle joint while leaping from a carriage in active motion [illegible] given in [illegible] [illegible] [illegible] [illegible] aggravated all the distressing symptoms of the case. Vesication will generally take place in 3 or 4 hours, when if the vesicaule are very large and profuse should be punctured to give exit to the effused fluid. Also Iodine in the form of the Ointment or painting the part with the Alcho solution has been used in [illegible] by many of our [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] fine applications of various kinds as [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] ticularly in those resulting in these cases

In

On

General Anatomy.

Submitted

to the

Examination

of the

Trustees, Regents & Faculty

of the

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for the

Degree of

Doctor in Medicine,

by

John Dickson

of

Baltimore

February 1832. Maryland.

Dr's.

Drs. Joseph Roby & M. L. Dashiell.

This Thesis is most respectfully dedicated.

To the one, in admiration of his brilliant literary and scientific attainments;

to the other, in gratitude for his attention as a Preceptor, and Kindness as a Physician and Friend.

J. D.

The Study of Nature is one which has claimed the attention of the thoughtful mind in every age. Centuries have been spent in endeavouring to unravel her mysteries and ages of toil exhausted in idle speculation and vague hypothesis. Yet all this has not been without its valuable results. Every day reveals to us some new triumph of labor. The whole surface of Nature is becoming brighter and brighter by the illuminations of science. Elements which used to seem the weapons of destruction are now made subservient to the will of man for use or for pleasure. Every new discovery shows us the value of study. Had all things been manifest to us from the beginning then there would have been less use for our intellectual functions. But we cannot suppose the human mind capable of receiving such knowledge at once.

We perceive the design of the Creator in this constituting our minds. He gives us faculties which are to be improved, and imparts to us knowledge in proportion as we strive to attain it.

In no part of natural science do we see more strikingly the design of creation than in the anatomy of the human frame. Here we have a combination of tissues and organs, each answering its particular purpose & performing its proper function. Nothing superfluous, nothing wanting.

I purpose examining briefly the several structures as they occur; beginning with the Cuticle.

This is a thin diaphanous membrane investing the external surface of the body, and forming with the dermis the integument or skin. The Epidermis [illegible] to the [illegible] of mechanical and chemical [illegible]

undergoing [illegible] of [illegible] [illegible] separation. Each lamina of which it is composed increases in density as it approaches the surface; and as the external layer is destroyed the [illegible] [illegible] [illegible].

This is carried on by progressive cell development. The deepest of these laminae is connected with the Dermis and is called the Rete Mucosum. It is to the pigment secreted in its cells that the various hues of complexion are due.

The outer surface of the Dermis is covered with papillae on which the rete mucosum is formed. These papillae vary in size. When they are large, as on the soles of the feet & palms of the hands [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] amply supplied with blood-vessels and nerves. The deeper stratum is principally composed of areolar tissue. This forms a net work which

grows coarser as it recedes from the surface.

The finer superficial strata contain the yellow elastic tissue while the dark contractile tissue lies in the areolar beneath. Like the papillary layer it is thickened where it is most used.

The Dermis is furnished with a complete apparatus of sensation and nutrition. Arteries, veins, nerves & lymphatics are freely distributed through its areolar to the papillary surface where they terminate.

The Nails are analogous in structure to the epidermis. Their external surface is continuous with it, their internal connected with the papillae of the dermis, and their roots arising from the dermis. They are hard, elastic, and resemble bone in appearance.

Another appendage to the skin is the Hair. This arises from bulbs or roots, situated in the cellular portion of the dermis and [illegible] from it. [illegible]

[illegible]

A difference in the coloring fluid will produce grayness. If the passage of the fluid be obstructed baldness will ensue. The pulp contained in the bulb forms and nourishes the hair as the papillae of the dermis do the epidermis. The vessels of the pulp throw out plastic lymph which turns into cells and these cells into fibres; and when they reach the surface they flatten into scales.

Numerous small glands are situated in the dermis which secrete a sebaceous fluid. This oily matter is distributed over the epidermis and the surface of the hair by means of excretory ducts. The sebaceous are most numerous in parts which are exposed to the atmosphere and friction, as the face, [illegible] &c.

The perspiratory glands are situated in the deep portion of the dermis and are furnished with spiral ducts, terminating on the surface of the cuticle. These ducts, like those of the sebaceous glands, are more spiral, more regular, and more frequent where

they furnish exposed surfaces. The condition of the skin forms an important sign in our diagnosis for the treatment of disease. Impairment of its function occurs in almost all diseased conditions. Of course whenever it does occur we should endeavour to obtain it as soon as possible, as the danger of the [illegible] is always materially augmented by it.

The Muscles constitute the great motor [illegible] of the animal frame. Connected with the bones, ligaments and tendons they form the apparatus of locomotion. They act as coverings to the bones, and walls to the cavities - protecting the viscera within. They also give to the body its natural symmetry and beauty of figure. Muscles are composed of parallel rows of fibre each enclosed within a sheath of cellular tissue. This cellular tissue converges and occupies the place of the muscle at its extremities. It is then extremely dense and strong, forming the tendon of attachment between the muscle and the bone. All muscles are not tendinous

at [illegible] their extremities, nor do all muscular fibres run parallel, or longitudinal. The fibres of the [illegible] [illegible] [illegible] [illegible] [illegible] a central tendon. In the pectoral, [illegible] [illegible] [illegible] muscles they [illegible] [illegible] [illegible] [illegible] manner. [illegible] [illegible] [illegible] [illegible] side of a [illegible] tendon and [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] of a quill. In the sphincters the [illegible] [illegible] circular lines. The term "belly" is applied to the central fleshy portion of the muscle — "origin" to the more fixed point of attachment, and "insertion" to the movable point. These terms [illegible] [illegible] [illegible] properly used in this sense. [illegible] are many exceptions to the general rule.

Each fasciculus of which muscle is formed is composed of bundles of [illegible] [illegible] [illegible] [illegible] ultimate fibre. The [illegible] [illegible] [illegible] [illegible] fasciculus consisting of ultimate fibrils. Each fasciculus, fibre, or fibril has its delicate sheath of cellular tissue. [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

transparent.

There are two kinds of muscular fibre in the animal economy — those which reside in the voluntary and those of the organic life. The ultimate fibres of voluntary muscle [illegible] a peculiar appearance which distinguishes them from those of organic life. They are characterized by fine transverse markings occurring regularly at short distances. There are also longitudinal striae marking the course of the fibrillae within its sheath.

The ultimate fibre of animal life when viewed separately by the microscope is cylindrical, but when it enters in combination to form the ultimate fibre, it becomes polygonal. These fibrils are composed of minute cells which are filled with a transparent substance called by Dr. Wilson, Myoline.

The ultimate fibre of organic life is flat, irregular and [illegible] [illegible] [illegible] [illegible] transverse [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]. The fibre [illegible]

in fasciculi of various size, and are enclosed in [illegible] ~~areolar~~ nuclear fibres.

The ultimate fibre of the heart, although of organic life, has the transverse striae peculiar to the fibre of animal life. This is an exception to the general rule.

To enter upon the history of the development of muscular fibre, or to note the particular use of each class of muscles would [illegible] too [illegible] from the [illegible].

The Tissue which unites the various [illegible] of the body between the integuments and muscles [illegible] variety of density in the various regions of the animal structure. From the delicate web-like tissue which invests the muscular fibre, we find it spreading out into a strong tendinous aponeurosis, acting as a protection to the weak organs and strengthening the action of the muscles by binding them firmly together. It also forms the [illegible] of [illegible] the individual muscles and the sheaths through which they pass.

The Ligaments are composed of white fibres

[illegible] running from the surface of one bone to another forming an [illegible] [illegible] in the [illegible] of the joints. They are of various strength and [illegible] according to the nature of the resistance or motion required.

In the hinge joints, which are of frequent occurrence in the body, there are four straight ligaments — two lateral [illegible] [illegible] [illegible]. The lateral ligaments are the [illegible] of [illegible] and the other [illegible] [illegible] [illegible] motion. Of this form of joint are those of the elbow, wrist, fingers, knees &c.

In the ball form of joint [illegible] [illegible] where great extent and variety of motion is allowed, as in the shoulder and hip, the articulation is encircled in a bag of fibrous membrane called capsular ligament. [illegible] [illegible] [illegible] [illegible] [illegible] of the [illegible] to [illegible] [illegible] [illegible], [illegible] a greater freedom and variety of motion than could be accomplished in any other way.

The office of a joint is further aided by the presence of cartilage on the articular extremities of bones. This is a smooth, white substance, and in young subjects possesses great elasticity. It sometimes forms the connecting [illegible] bones as in the symphysis, pubis &c. In other places it forms smooth [illegible] affording a [illegible] of articulation between the surfaces of two bones, as in the vertebrae. It is then called [illegible] cartilage.

The capsular ligaments are all lined with a serous sack called synovial membrane. The office of this is to secrete a viscid fluid which lubricates the joints and [illegible] It also protects the free surfaces from friction.

In the [illegible] found cushions of fat which probably have no other use than to fill up the vacant spaces in the joint, and [illegible] in its place.

The Bone constitute the great frame work
on which the other materials of the system rest.
They are firmer and harder in structure than any
of the other tissues, excepting the teeth. Like all
other organized substances they are the products of nutri-
tive movement. The process of formation has been di-
vided into three stages - gelatinous, cartilaginous
and osseous. In the first stage minute cells,
containing [illegible] unite with
each other, forming a soft pulpy mass. By
degrees an intercellular tissue is produced which
separates the cells. This fluid soon becomes dense,
and the structure assumes the form of cartilage
[illegible]
form vascular canals, which communicate in some
cases at which point begins the process of ossification.
At this time the cells themselves have undergone a
change. Nucleoli have formed within their nuclei
and [illegible]
in large [illegible]

nd fresh intercellular matter separates the new ones
around the points of ossification this process goes
so rapidly that clusters of cells are formed.
he cells composing the cluster are pressed together
t first but are gradually separated by [illegible]
[illegible] membrane. [illegible] are divided from each
ther by a thicker layer of membrane.

Ossification begins by the development of very
[illegible] fibres in the [illegible] [illegible]
[illegible]. In long bones these fibres assume a longitu-
dinal direction and traverse the whole intercellular
tissue. In [illegible] they radiate from the
central point, [illegible] [illegible]
part of the [illegible]

During these changes the contents of the cells be-
come cloud. From their original transparency they
become opaque and finally contain minute oil
globules which attain the size of adipose cells

The external periosteum meets the outer
[illegible]

covered by cartilage at the articulating extremities. It is of an exceedingly dense [illegible] and acts as a protection to the bone from surrounding disease. It also gives attachment to the muscles, tendons, &c.

In the long bones the internal surface is lined by a medullary membrane which acts as an internal periosteum. This contains the marrow. Both of these membranes are supplied with blood vessels which give nourishment to the bone.

Bones are divided into long, flat & irregular. The bones of the limbs are of the first class. They all have a cylindrical or prismoid shaft and two widened extremities for articulation. The hollow of the shaft is filled with the medulla, as mentioned above. Flat bones have two surfaces, each formed by a dense layer of bone. The intermediate structure is cellular. They generally serve as walls to exclude cavities. In the bones of the cranium the two layers of [illegible] the intermediate structure, diploe

The irregular bones have the same peculiarities of structure as the others. Their exterior dense, having irregular surfaces - processes for the insertion of muscles and foramina for the transmission of arteries, veins and nerves. They are not so easily divided into surfaces, angles, extremities, &c., as the long and flat bones. Bone is composed of animal and earthy substances. Phosphate of lime and other salts and alkaline matter form two thirds of its composition. The remainder is made up of cartilage and blood vessels.

The Teeth form the hardest structure in the body. [illegible] is composed of three different substances. The ivory which forms the principal portion of the tooth - the enamel which covers the body and protects it by its hardness, and the cementum which invests the root [illegible] [illegible] of the [illegible]. The ivory and enamel are composed of radiating fibres without vessels or nerves. The cementum is like bone in structure. It is perforated by a foramen

which allows the passage of an [illegible] [illegible] [illegible] to the [illegible] of the [illegible]. The teeth present a variety of forms which are distinguished by the names, incisors, cuspid, bicuspid, and molars.

The cavity of the mouth is lined by a mucous membrane which is continuous with the outside integument. The epithelium of this membrane is analagous to the epidermis of the [illegible]. The tongue is also covered with a thick layer of it upon its upper surface, besides [illegible] papillae which render its peculiar sensibility to [illegible].

The mucous membrane of the mouth, with the palate [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] stretched in a transverse fold from side to side called the soft palate. The uvula falls from the centre. On each side of it [illegible] [illegible] [illegible] [illegible] by [illegible] [illegible] [illegible] [illegible] with the tongue, the boundaries of the fauces. Between these, and the posterior arches on both sides, are

situated the tonsils. The [illegible] is drawn
up in deglutition to prevent regurgitation of the food
into the posterior nares, which [illegible] the cavity of
the pharynx. The teeth arise from the alveolar pro-
cesses of the maxillary bones. The gums are formed
of dense mucous membrane, adherent to the alveolar
processes and surrounding the neck of the tooth.
The lips and cheeks form the anterior and lateral
boundaries of the mouth, and are [illegible] by mucous
membrane. The mouth is supplied with three pairs
of salivary glands, which secrete the [illegible] of
their continual secretion; and also assist the
process of mastication and digestion.

The Pharynx is a muscular sac lined by
mucous membrane. It has also, a strong fascia
between the muscular and mucous coats which gives
it attachment to the occipital and temporal
bones. It lies in front of the cervical vertebrae
and extends from the base of the cranium down to
the fifth cervical vertebrae, at which point the oesophagus begins

It has opening into it, besides the two posterior nares, the two Eustachian tubes, the mouth, the larynx and the oesophagus.

The Oesophagus is a winding passage commencing at the termination of the Pharynx. In the neck it descends behind the trachea, and in the chest, before the thoracic aorta, till it passes through the opening in the diaphragm; and terminates in the cardiac orifice of the stomach. It is composed of a mucous and a muscular coat.

The Stomach lies in the left hypochondriac region immediately beneath the diaphragm. It is situated obliquely in the cavity of the abdomen. The greater or splenic end in the left, is embraced in the concavity of the spleen, and the right or pyloric end extends to the epigastrium below the left lobe of the liver. The stomach has two [illegible] that give attachment to the peritoneum. The upper to the lesser omentum and the lower to the greater omentum. The stomach has three coats. The outer serous, the middle muscular, and the internal mucous

The Duodenum [illegible] passes upwards and backwards below the liver. It then falls perpendicularly in front of the inferior [illegible] cava; ductus communis and right kidney. On its right border is the ascending colon, and on its [illegible] the [illegible] [illegible] the second [illegible] vertebra, and terminates in the jejunum.

The Jejunum forms the upper two fifths of the small intestines, and is thicker and more [illegible] in its appearance than the ileum.

The Ileum is thinner, smaller and longer than the jejunum. This includes the remainder of the small [illegible] [illegible] into the colon at an obtuse angle in the right ileo [illegible]

The Colon surrounds the ileum and jejunum above and on both sides. The [illegible] water [illegible] them in [illegible] and the [illegible] them in their places. They descend into the cavity of the pelvis below.

The Coecum is retained in the [illegible]

[illegible] by the [illegible] passing [illegible] [illegible]
It is [illegible] [illegible] [illegible] [illegible] to the
iliac fascia. It is a blind sac at the [illegible] of
the large intestines, to which is added, at its extremity,
a small worm-like canal called the vermiform appen-
dix.

The Colon ascends from the right iliac fossa
behind the small intestines as far as the [illegible]. [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible],
stomach and spleen, forming a convexity anteriorly
and sometimes inferiorly. The descending colon is
narrower and more deeply seated than the ascending.
It is narrowest at the sigmoid flexure, which curves
first upwards and then downwards to one side.
The meso colon keeps the descending colon in its
[illegible].

The [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
It is situated a little to the left side [illegible] down [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

The stomach and intestines have three coats — the outer serous, formed by the peritonaeum; the middle muscular and the inner mucous. The peritonaeum does not completely cover all the intestines. The transverse and descending portions of the duodenum are only partially covered anteriorly. The ascending and descending colon have peritonaeum only in front; and the rectum, in its upper third and middle third anteriorly.

The [illegible] [illegible] [illegible] [illegible] of fibres — longitudinal and circular. The longitudinal fibres [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] and the circular fibres form a thick ring which enters, with [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] that [illegible] of the [illegible].

These layers of muscular fibre are distributed [illegible] [illegible] [illegible] [illegible] of the [illegible] the circular fibres are [illegible] from the internal sphincter ani.

of circular patches presenting the appearance [illegible]

Each [illegible]

[illegible]

[illegible]

to the lower end of the ileum.

[illegible] the

body. [illegible]

immediately beneath the diaphragm, and having

its lower or free edge level with the last rib.

[illegible]

is held in its place by fine ligaments. It performs

the [illegible] of [illegible]

[illegible]

[illegible]

[illegible] situated in the [illegible]

[illegible] of the liver. [illegible]

[illegible] through [illegible]

[illegible]

[illegible] Process [illegible]

running transversely across the abdomen, behind the stomach. It [illegible] [illegible] by an excretory duct into the duodenum.

The [illegible] is an oblong [illegible] the diaphragm and [illegible] of the stomach. It is convex externally and concave internally. It is abundantly supplied with blood-vessels and lymphatics, but it has no excretory duct [illegible] is not known.

[illegible] bodies - the supra-renal capsules. These [illegible] plied with [illegible] [illegible] of the [illegible] [illegible] stomach, the colon, descending colon and a [illegible]

of the [illegible]. The [illegible] of the [illegible] [illegible] [illegible] of [illegible] [illegible] [illegible]. [illegible] is composed of two [illegible] [illegible] [illegible] [illegible]. The [illegible] portion is formed of blood-vessels and minute uriniferous tubuli. The internal [illegible] portion is composed of [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] of the kidney. [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]. [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] infundibula which unite and form the pelvis of the kidney.

[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] of the kidney [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

[illegible] in the cavity of the scrotum.

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

ical ring and passes down obliquely through the

[illegible]

[illegible] and passes into the scrotum to the pos-

terior [illegible]

[illegible]

[illegible]

[illegible]

of the female organs of generation requires too elabor[illegible]

description [illegible]

[illegible]

[illegible] distributed to nearly all [illegible] of the [illegible]

They begin on the cutaneous surface of the body and on the surface of the several organs by an exceedingly fine net work. ~~From this~~ They are met with numerous little glands throughout their course which is always towards the root of the neck. These glands are termed lymphatic glands. The injurious matter of the body is removed by the process of absorption which these vessels perform. The lymphatics of the small intestines are called lacteals because they convey the chyle to the thoracic duct. By means of this duct the products of digestion are emptied into the venous circulation near the heart.

Lymphatics are composed of three fine coats. The internal coat is continuous with that of the veins and is arranged in numerous little valves which give the vessels a knotted appearance. Lymphatic glands are composed of a plexus of lymphatics and minute blood-vessels enclosed in a capsule of cellular tissue. They are situated in the least exposed parts of the body as in the [illegible] of the stomach and thorax and in the axilla, groins, neck &c.

The organs of the voice and of respiration comprise the Larynx, Trachea, Bronchi and Lungs.

The Larynx is formed by five cartilages united by ligaments in the shape of a cone with its base superiorly and attached to the base of the tongue. The voice is modulated by means of two small ligaments enclosed in mucous membrane and running from the angle of the thyroid cartilage to the two arytenoid cartilages. The opening between these is called the chink of the glottis. This is guarded from the entrance of substances during deglutition, by a small fibro-cartilage called the epiglottis. The larynx has several pairs of muscles which give it motion and attachment to the surrounding parts — the base of the skull, oesophagus, the tongue, hyoid bone &c.

The Trachea is a continuation of the larynx extending down before the oesophagus as far as the third dorsal vertebra where it divides into the two bronchi. It is composed of a succession of fibro-cartilaginous rings connected together by yellow [illegible]

fibrous tissue. These rings extend about three fourths around the cylinder of the trachea, the rest of the tube being made up of fibrous membrane. There is a layer of muscular fibre running transversely between the extremities of the cartilages. The trachea is lined by mucous membrane continuous with that of the larynx and oesophagus; and is also supplied with racemose glands which pour their secretion upon the mucous membrane.

The two Bronchi or the branches of the trachea running from its bifurcation to their corresponding lungs. Their structure is the same as that of the trachea but as they break up into minute ramifications they lose their fibro cartilaginous consistence.

The Lungs are conical in shape with their apices behind the first ribs and their bases resting on the diaphragm. The right lung is larger than the left. It also has three lobes and the left has only two. The lungs are composed of air vesicles connected in cellular tissue through which minute air tubes and

blood vessels & nerves. Several air vesicles communicate with each other and with a common air tube. This forms a lobule. The change from venous to arterial blood is effected by the action of the atmosphere on the capillaries of the lungs. The root of the lungs is formed by the bronchus, pulmonary artery, two pulmonary veins, bronchial artery and vein, nerves and lymphatics. The air vesicles are lined with mucous membrane continuous with that of the bronchi.

The Pleura is the investing membrane of the lung. It is a serous membrane like the peritoneum. After covering the lungs it is reflected over the internal surface of the thoracic cavities and on the diaphragm.

The Heart is a muscular organ of a conical form, situated between the two pleurae with its base upwards and its apex looking downwards and to the left. It contains four cavities - two auricles and two ventricles. The auricle on the right side

receives the venous blood from the ascending and descending venae cavae; it then passes through a valve opening into the right ventricle, and by the contraction of the ventricle is forced through the pulmonary artery into the lungs to become aerated. The arterialized blood is returned to the left auricle of the heart by the four pulmonary veins. From the left auricle it enters the left ventricle through the auriculo-ventricular valve, and is pumped from thence to the aorta so to be distributed throughout the system.

The size of the adult heart is about that of a man's closed fist. It is surrounded by a fibro-serous membrane, the pericardium.

Arteries have three coats - external, dense cellular tissue; middle, muscular and internal serous. The middle coat is formed of circular elastic fibres. The internal is thin, smooth, and readily worn by the constriction of the ligatures. The coats of the vessels are nourished by little blood vessels called the vasa vasorum. The arteries terminate

in capillaries

The Veins are also composed of three coats, but which are thinner than those of the arteries. The internal coat is arranged in valves which open towards the heart. The veins return the blood from the capillaries to the right side of the heart.

The Nervous system is composed of the brain spinal cord and sympathetic system. The brain is that which is included within the walls of the cranium, and is divided into cerebrum and cerebellum and medulla oblongata. The brain is invested by three membranes. The outer one is hard, fibrous and inelastic; the middle is serous and in the healthy state is constantly moistened by its peculiar secretion; and the third which covers the substance of the brain immediately, is vascular and [illegible] the organ. The Dura Mater, or first tunic, sends processes down between the hemispheres of the cerebrum and cerebellum and also separates the cerebrum from the cerebellum. This acts as a valuable protection to the organ

from injury. In this membrane is situated the venous sinuses of the brain which collect the blood from its substance and carry it to the jugular veins. The Cerebrum is composed of white and gray substance and has within it four ventricles, the corpus striatum, taenia semicircularis, thalamus opticus, choroid plexus, corpus fimbriatum, fornix, pes hippocampi, hippocampus major, pes accessorius, olfactory nerves, substantia perforata, optic commissure, tuber cinereum, infundibulum, corpora albicantia, crura cerebri, pons Varolii, and locus perforatus. The arteries of the brain originate from the internal carotids, and vertebral arteries.

The Cerebellum is the smaller portion of the organs within the cranium, and is separated from the posterior part of the cerebrum by a process of the dura mater called tentorium, but the inferior portion of it is connected directly with the cerebrum. It is also composed of two hemispheres which rest on the occipital bone.

The Medulla Oblongata is the smallest of the

divisions of the organs within the cranium; and rests on the basilar process of the occipital bone. It is a little more than one inch long, and is divided into three bodies — the corpora restiformia, corpora pyramidalia and corpora olivaria. It has also within its substance one ventricle.

The bodies of the brain which have been mentioned give origin to twelve pairs of nerves. Numbering from before backward we first find the olfactory, which is of special sensation and is distributed to the nose. The second nerve is the optic, also one of special sense, running to the eye. The third is one of motion, and distributed to the appendages of the eye. The fourth is one of motion and runs to the superior oblique muscle of the eye. The fifth is a nerve of special and common sensation. The sixth is a nerve of motion & is distributed to the external rectus muscle of the eye. The seventh is one of motion and goes to the side of the face and neck. The eighth is one of special sense and goes to the ear. The ninth is distributed

to the tongue and pharynx. The tenth goes to the cavity of the chest and abdomen. The eleventh goes to the side and posterior part of the neck. The twelfth is distributed to the tongue.

The Spinal cord is invested with the same coverings as the brain, and extends from the Medulla Oblongata to the second lumbar vertebra and terminates in the cauda equina. It gives off nerves through the intervertebral foramina to the parts anteriorly and posteriorly. By its nervous filaments it connects with that of the sympathetic nervous system situated within the cavity of the body and sides of the neck.

The Eye is situated in the cavity of the orbit. It is composed of three coats and three humors. The outer. The sclerotic coat is formed of white fibrous tissue and invests the whole surface of the eye except that part called the cornea. The choroid is the second coat of the eye, immediately behind the sclerotic.

The retina is the expansion of the optic nerve, and the part on which the impression is made

The cornea is the transparent circular portion on the anterior surface of the eye, which is a segment of a circle smaller than that of the globe of the eye. It is united to the sclerotic coat by the ciliary ligament. The iris falls from this ligament having on its posterior surface the ciliary bodies, formed by folds of the choroid coat and converging towards the pupil. The iris contains the pigment which gives color to the eye. The pupil is a round hole in the center of the iris through which the rays of light pass. It widens or contracts according to the greater or less intensity of the light transmitted.

The eye may be divided into two great chambers. The anterior contains the aqueous and the posterior the vitreous humor. The chrystaline lens is suspended between them & is the densest of the humors. It is a double convex body having its greater convexity posterior. It is separated from the vitreous humor by the hyaloid membrane and is invested by a delicate transparent membrane called the capsule of the lens.

The anterior chamber containing the aqueous humor is divided into two portions by the iris. These portions communicate by the pupil.

The aqueous humor is an albuminous fluid of little greater specific gravity than water.

The vitreous humor is more dense than the aqueous and occupies the greater portion of the globe of the eye. It is enclosed in the hyaloid membrane which sends processes inwards forming numerous cells containing the vitreous humor. This humor is not capable of reproduction like the aqueous humor.

The appendages of the eye are the eye brow, eye-lids, conjunctiva and the lachrymal ~~and~~ apparatus.

The eye brows are the two upper boundaries of the orbit. They are arched projections of integument covered with thick short hair which protects the eye from the perspiration of the forehead and serves to modify in some degree the intensity of the light.

The eye lids are composed of integument lined by mucous membrane and bounded on their free edges by the tarsal cartilages from which a triple row of long coarse hairs arise and curve up-

wards from the upper lid and downwards from the lower lid. This prevents them from interlacing when the lids are closed.

Along the inner edge of the tarsal cartilages are situated numerous little glands which pour out their secretion along the edges of the lids, preventing them from uniting during sleep. The eye-lids form a protection to the eye from moisture, dust and all foreign substances.

The conjunctiva is the fine mucous membrane of the eye. After covering its anterior surface it is reflected upon the lids rendering their motion easy and preventing irritation from friction.

The lachrymal gland is situated at the upper and outer angle of the orbit. Its secretion is conducted to the border of the tarsal cartilage of the upper eye lid, opening on the surface of the conjunctiva. The lachrymal gland canals commence as little openings on the edge of the eye lids and terminate in the lachrymal sac, which is the upper and wider portion of the nasal duct.

The nasal duct is a canal about three quarters of an inch long running downwards and backwards to the inferior channel of the nose when is terminates.

The Ear is composed of three parts - the external, the middle and the internal.

The external ear consists of the auditorius pinna and the meatus auditorius. The pinna is a kind of funnel formed of cartilage, integument, ligament and muscles. It has numerous irregular depressions and elevations in its surface. It collects the vibrations of the atmosphere.

The meatus is a tube which conveys the sound to the tympanum. It is partly cartilaginous & partly osseous. It is about an inch long extending from the pinna to the tympanum. In this canal of outside lines is beneath which are the ceruminous follicles which secrete the wax. In its interior are found some short stiff hairs which are stretched across the canal and act as a barrier to the entrance of insects, dust and such like articles

The Membrana tympani is a thin semitransparent of an oval shape and about three fourths of an inch in diameter. It is inserted into a groove around the circumference of the meatus near its termination. It lies obliquely across the area of the meatus. It is composed of three layers - an external epidermic, middle, fibrous and muscular, and internal mucous. It is convex towards the tympanum and concave towards the meatus.

The tympanum is a bony cavity bounded in its circumference by the petrous bone and the mastoid celary, internally, by the membrane of the tympanum, and internally, by its inner wall. It contains within it four small bones named, the malleus, incus, stapes and orbicular. They are irregular in shape and are named according to their imagined resemblances to the hammer, anvil stirrup and globe.

There are five principal openings into the tympanum - the meatus auditorius; the fenestra ovalis which communicates also with the vestibule in which the foot of the stapes rests; the fenestra rotunda [illegible]

the tympanum and cochlea; the common opening of the mastoid cells, and the Eustachian tube unites the pharynx and the tympanum. This tube is partly cartilaginous and partly bony, and is wider at the pharynx than at the tympanum.

The internal ear consists of a membranous and bony portion. The bony labyrinth consists of a number of cavities which are channelled out of the substance of the petrous bone. It is divided into the vestibule, semicircular canals and cochlea.

The vestibule is a small three sided cavity situated immediately within the inner wall of the labyrinth. There are seven large openings into the vestibule - the fenestra ovalis, scala vestibuli, & five openings of the three semicircular canals.

The fenestra ovalis is the opening into the tympanum. The scala vestibuli is the commencement of the vestibular canal of the cochlea. The semicircular canals are three bony passages communicating with the vestibule into which two open at both extremities and the third at one only

The cochlea forms the anterior portion of the labyrinth. It is a tapering, bony canal which two and a half turns upon a central axis called, the modiolus. It is divided internally into two passages by a membranous and bony lamina called, the spiral lamina. These two passages or scalae communicate with each other at the extremity of the modiolus. At the other extremity, one opens into the tympanum by the foramen rotundum, and the other into the vestibule.

The membranous labyrinth is composed of the fibrous membrane, and is a perfect counterpart of the bony labyrinth and semicircular canals except that it does not fill up entirely their cavities. It is filled with a clear limpid fluid called, the liquor Sempaei.

The Auditory nerve divides into the cochlear & vestibular portion at the bottom of the meatus and passes inward. They enter the foramina of the membranous labyrinth, ramifying in all directions, forming interlacements and loops and terminating in minute papillae on the inner surface of the membrane.

The Nose is composed of skin, muscles, bones, cartilages, mucous membrane, blood vessels and nerves.

The bones of the nose are the two nasal, and the nasal processes of the superior maxillary bone.

There are five elastic cartilages which give form and stability to the nose. The mucous membrane lining the internal surface of the nose is continuous with that of the cavities within.

The anterior nares are partially protected from dust and foreign substances by numerous little hairs which arise from the mucous membrane within.

The nasal fossae are two irregular cavities extending from the nose to the pharynx.

They are bounded by the sphenoid and ethmoid bones superiorly, and inferiorly by the hard palate. They are divided from each other by a cartilaginous septum.

There are three channels which extend from the spongy bones upon each inside

into the cavity of the nose. They are called meatuses, and are lined by a pituitary membrane upon which the olfactory nerve and a branch of the fifth pair ramify.

The senses of touch and taste have been alluded to before when speaking of the integument.

I must now bring this brief and imperfect sketch of my subject to a close. If it meet the approval and acceptance of your Noble and Learned Body, my anxious and earnest hope will be realized.

An

Inaugural Dissertation

On

Cynanche Trachealis,

Submitted to the Examination

of the

Provost, Regents,

and

Faculty of Physic

of the

University of Maryland

for the degree of

Doctor of Medicine

by

Edward S. Griffith,

of Bell Co.

Md

# Cynanche Trachealis

Gentlmen.—

As it is the duty of every Student wishing to become a member of the Medical Profession, to prepare an original dissitation upon some subject pertaining to that Profession, and I being an aspirant for the honourable title of Doctor of Medicine do willingly undertake the task imposed upon me. Croup, the common appellation and perhaps the best one for the affection which I have selected for the subject of my Thesis, is not essentially inflammation of the Trachea (as Cullen's Cynanche Tracheals, or the more modern Tracheitis would lead us to suppose). There may be Croup without disease of the Trachea and there may be inflammation of the Trachea without Croup, as very often happens in the catarhal affections of very young children. Tho Croup the inflammation may be confined to the Larynx, but it generally

extends to the Trachea, and sometimes even to the smaller ramifications of the Bronchial tubes. The Larynx never escapes injury, or at least is always disordered in its function. There is something besides the inflammation in Croup equally as essential; which is spasm of the interior muscles of the Larynx, for we often have the air passages inflamed in other and and very different diseases, such as Scarlatina, Rubeola, Variola &c. — Cullen defines Croup to be Cynanche, respiratione difficili, inspiratione stepente, voce rauca, tussi clangosa, tumore fere nullo in faucibus apparente, deglutitione parum difficili, &c, does not mention the spasm. Dr. Wood in his treatise on the practice of Medicine gives what I conceive to be a very good definition of this disease in says it depends upon inflammation or slight vascular irritation of the laryngeal or laryngo-tracheal mucous membrane combined with spasm of the

inferior muscles of the Larynx, giving rise to peculiar modifications of voice, cough, and respiration. Under the general term croup we recognize two distinct forms of disease. The one usually met with in this country, termed Catarrhal Croup, is an affection which yields very promptly to the early application of remedies, and when properly treated the mortality is very trifling. The other variety, described by European authors, is a very formidable malady; called from its most important symptom pseudo-membranous croup, from the formation of false membrane, in which it differs so essentially from the former variety, when the secretion if there is any, is mucus, pus, or a muco-purulent fluid according to the circumstances of the case. But in this the more dangerous form there is an albuminous or fibrinous exudation upon the inner side of the air passages. In the beginning it is not easy to say which form of the disease we are about to encounter. Consequently

it requires us to be prompt in the administration of our remedies. — Symptoms — In Catarrhal croup the form which I propose first to speak of the child (for it is a disease almost peculiar to childhood), generally complains in the beginning with the symptoms of common Catarrh, such as coryza, sore throat, cough resembling that of common cold: but sometimes the cough is croupy sometime before the paroxysm comes on. The attack almost always occurs in the night and most often in the early part of it, and sometimes without any of the warning symptoms that I have mentioned, the little patient starting up out of its sleep with the peculiar brassy cough which is so characteristic of the disease succeeded immediately by a noisy, stridulous inspiration. With these there is dyspnea which is often very distressing, the respiration being dry and wheezing as if the air was drawn through a narrow passage. The voice if used is rough and hoarse sometimes there is only quite aphonia or whispering, which is only temporary,

This is a diagnostic point in the discrimination of the two varieties of croup, if the voice be sonorous we may hope that it will be catarrhal croup, but when it gets down to a whisper we have more to fear.

There is always great distress during the paroxysm, the patient either sits up or throws himself about in bed, or lies on his back with his head extended so as to allow as free an entrance of air to the lungs as possible, he puts his hands to his throat as if to remove the cause of his great distress, when able to speak he complains of tightness and pain in his throat. The countenance appears alarmed and anxious, and at first is usually flushed, the skin warm, and the pulse frequent and febrile. If the paroxysm continue very long and is very severe the effects of impeded respiration become manifest, in the state of the blood which is not sufficiently oxygenated, the lips become livid or purple, the face pale, the extremities cool, the pulse very frequent, feeble and irregular and the patient

appears almost lifeless. When the spasm ceases and the air is again allowed to enter the lungs more freely, often which the patient falls asleep and wakes up greatly relieved. Though in some very severe cases fatal asphyxia has occured before the subsidence of the paroxysm. As I have before said the attacks generally occur in the night, but sometimes they occur in the daytime, and when they do they are said not to be so severe. The length of the paroxysm varies from a few minutes to several hours. After an attack of croup in the night the patient often appears nearly well in the morning except the peculiar brassy cough which is occasionally heard, with hoarseness and some redness of the fauces, but if properly treated and sometimes even without any treatment at all, the patient may completely recover without the return of another paroxysm. — Generally however the cough and dyspnea return through the day and still more frequently during the following night, the paroxysms being often more violent than at first,

It may go on in this way for two or three days, with occasional exacerbations and remissions, which are more or less severe according to the degree of inflammation. if this be moderate, the paroxysms become milder and more mild until they cease to recur, nothing but a little common cough being left which soons disappears. But when the inflammation is more severe, the course of the disease is more unfavourable. Along with the croup we have the symptoms of catarrhal fever supervening, such as a hot skin, a very frequent pulse, respiration rapid, cough frequent, and pain or soreness of the chest upon pressure. The external parts become occasionally tumid, there is constant dyspnea, with sonorous and even sibilant inspiration, which depends in part upon the swelling of the mucous membrane and partly on account of the spasm of the muscular fibres, the voice though hoarse, is not suppressed. the cough is sonorous. The slightest causes as crying, attempts to speak or drink, bring on the most

distressing dyspnea, with paroxysms of suffocative cough, sometimes attended with emesis— If this be not given the patient may die suddenly in one of these spasmodic attacks, or after suffering extremely may perish more slowly of suffocation— At the end of two or three days if the patient survives, what is called the second stage with a new set of symptoms usually commences. The stage of secretion. The cough now sounds more broken and loose, particularly after a paroxysm; and a little clear mucus or mucus tinged with blood is thrown up. If there is a disposition to a favorable termination the paroxysms of cough become shorter and more mild, the harsh ringing cough ceases and it becomes quite loose— The expectoration (if the child be old enough to expectorate) is freely discharged, at first it is thin mucus, and then it becomes whitish and opaque and ultimately purulent as in adults. The symptoms of croup disappear and the child is soon

days completely recovers— But sometimes the secretion is in excess, beyond the ability of the patient already greatly weakened, to throw up, which being added to the embarrassed respiration brings on a fatal defect in the formation of blood. Not unfrequently Bronchitis or Pneumonia supervenes which often occasion the death of the patient—

Causes— Cold or cold combined with moisture is certainly the most common cause of croup in all its forms and particularly of the catarrhal form. A sudden change from a hot to a cold air, as sleeping in a cold chamber after having been and in hot rooms all day, is a frequent cause of this disease— The inhalation of irritating substances into the lungs has sometimes caused it—

Age appears to be a predisposing cause though it is not confined to any period of life positively it is very rare in adult age and seldom seen in very early infancy. From the first to the seventh year is the time we most frequently meet with it. Croup

it is not uncommon at any age before puberty —
Sex, too appears to have some influence in the
in the cause of this affection, males are more fre-
quently attacked than females, particularly the
pseudo-membranous variety. There appears to be
sometimes an hereditary tendency to the disease.
the children of certain parents are attacked
while others who appear to be as much exposed
escape — The most robust and healthy looking
children are said to be ~~the~~ most frequently affected.
Some writers have supposed it to be a contagious dis-
ease, but uncomplicated croup is thought by the
profession generally now to be contagious. —
Anatomical Characters — There is redness of the
laryngeal, tracheal, and bronchial mucous
membranes, with sometimes swelling of the
submucous tissue from infiltration, and
more or less mucus in the air passages. Which is
tough and viscid if death has taken place early
but more abundant and often purulent in

the more advanced stages. In some cases, though rarely, no signs of disease can be discovered in the mucous membrane, and death has been caused probably by spasm, consequent upon congestion or great vascular irritation which leave no mark after death — — — — — — — — — — —

Prognosis — To say anything upon diagnosis I would have to repeat a great deal of what I have already said, therefore I will go right on to the prognosis, this in uncomplicated catarrhal croup is almost always favourable, if seen early and properly treated, but if neglected, until the inflammation has extended into the smaller bronchial tubes, or into the substances of the lungs, or as the disease sometimes does assume the pseudo-membranous form the result is more uncertain, and frequently fatal —

Treatment— It is impossible to say from the first symptoms that the case will be a harmless one. Consequently the treatment should be prompt and decided. So soon as we hear the croupy cough and dyspnea, we should administer an emetic. The stomach is usually very insensible to the impression of emetics, therefore the dose should be increased. Ipecacuanha is the article usually chosen, when the symptoms are mild and attended with little or no fever— But when they are more severe and decidedly febrile, tartar emetic is preferred. From four to six grains of Ipecac or ½ to ⅔ of a grain of Antimony may be given to a child two years old every fifteen or twenty minutes until it vomits. Antimony should always be prefered in doubtful cases, it is the most efficient remedy of the two, because it is more nauseating and consequently relaxing, more sedative and powerfully revulsive. Nitre has been recommended to be given

until it produces vomiting - From the alterative influence which this medicine exercises over the respiratory mucous membrane, there is no doubt that it is capable of doing good independantly of its emetic property, it is however considered better adapted to the advanced than to the earlier stages - A combination of Senicka, squill and tartar emetic in form of the Compound Syrup of squill of the pharmacopœia has been much used and with advantage in all stages of croup, given in doses of thirty or forty minims to a child two years old until it produces emesis. The warm bath at a temperature of about 98 degrees will aid very much the operation of the Emetic, if it should be disposed not to act - The patient must be carefully protected from cold air during the process. When removed from the bath, he should be wiped dry with a warm towel and wrapped in a warm blanket for a while. The bath may be resorted to at any period of the

disease except the last stage. for overcoming the spasm during the paroxysm, even after the operation of emetics, should the symptoms not yield to them. In mild cases vomiting produces great relief; the spasm relaxes, the dyspnea subsides, and the patient falls asleep, from which he awakes greatly relieved, if not well, for the cure is frequently accomplished by this simple treatment; nothing more being necessary now but to open the bowels should they need it, by a dose of castor oil, and to keep up a slightly nauseating effect by small doses of wine of Antimony, or Specac. or compound syrup of squill at intervals of three or four hours, until the croupy cough ceases, and the danger of another hæmorrhage is removed. Care should be taken in prescribing Antimony not to give it in too large doses or continue it too long. It should always be omitted if it purge or produce much prostration —
Not unfrequently however and fortunately in when

the inflammation is extensive, the spasmodic symptoms resist the action of an emetic. In such cases if the pulse will justify it, blood should be taken from the arm. The quantity taken should be regulated by the effects produced. From two to five ounces may generally be taken from a child two years old, and carefully increased according to the age of the patient. If the bleeding does not afford the relief we expect, we may again resort to the emetic and warm bath treatment. Should this fail I believe the next thing recommended is tobacco, applied in the form of fomentations or cataplasms, to the throat. We should be very careful in using this remedy, and remove it as soon as we have obtained its relaxing effect, for fear of the danger of prostration which may result from it if neglected. The lobelia is said to be highly serviceable given internally, when a powerfully relaxing effect is required, combined with one of the emetics already mentioned.

I have been speaking of the treatment especially adapted to the paroxysm. After that has been subdued or has subsided, we must be guided by the circumstances of the case. I have already mentioned the treatment to be adopted if the croupy symptoms have disappeared and nothing remains but a little cough. But it frequently happens that there is left considerable inflammation and fever, with cough and dyspnea, after the violence of the paroxysm has been subdued, threatening another attack. Then it will be necessary to give a full cathartic dose of calomel, three or four grains to a child of two years, assisted in a few hours by a dose of castor oil. We may keep the patient at the same time slightly under the influence of Antimony, Ipecac, or some such. If there should be much difficulty of respiration, or evidences of pain in the throat or chest, leeches should be applied either upon the throat or upper part of the sternum, wherever the inflammation seems most severe—

Great care should be taken to arrest the hemorrhage from the leech bites. After leeching, an emollient cataplasm should be applied to the throat and chest. If the paroxysm should return with the same violence as at first, or as they sometimes do, with increased violence, we will have to go through the same old routine of remedies, the emetic, warm bath and bleeding again if the pulse will permit, though we should be very cautious in abstracting blood in this stage of the disease. After the more violent inflammatory symptoms have again subsided, counter irritation to the throat and chest will often be useful in removing the remaining inflammation, and also the tendency to a return of the spasm. The rubefacients should be preferred, but if the vesicants are used, particularly cantharides, they should not be allowed to remain on long, and should be followed by a poultice. Should we be called to a patient after the disease has entered the advanced stage, and

see the peculiar symptoms still continue, such as dyspnea, the croupy cough and voice, high fever, and signs of extensive inflammation of the air passages, we should then bleed as freely as the pulse and strength of the patient will permit, and if doubtful about bleeding, should use leeches with caution. Emetics, the warm bath, calomel as a purge, followed by small and repeated doses of antimony. Should this prove unsuccessful we should mercurialize the system without hesitation. One grain of calomel may be given every two hours until it purge with a little Dover's powder. It may happen in some few instances that all the remedies mentioned fail, the system then is generally too much weakened, for any further depletion, the lungs are overwhelmed with the secretion, and immediate suffocation is threatened, it is then that stimulants and expectorants must be used with external revulsives. Decoction of senega, asafoetida, tinct. ammonia valerian musk, wine whey &c. are recommended.

## Pseudo-Membranous Croup.

Pseudo membranous, or true croup as it is termed, is that form usually described by European authors, but is very rarely met with in this country, at least in comparison with the milder form.

Symptoms. This form of the disease does not always begin in the same way. In some cases it assumes the pseudo membranous form from the beginning. This is not owing to the violence of the inflammation, for it is often so slight as to be scarcely sufficient to induce fever. It is ascribed to a peculiarity in the character of the inflammation or of the blood which causes this result. We must always suspect when we hear the whispering voice, the cough as if it muffled, wheezing inspiration, and particularly when we can discover the fibrinous exudation, by an examination of the fauces, that it is pseudo membranous croup. very frequently however we have inflammation existing sometime before the plastic exudation takes place.

The symptoms are sometimes exactly those of catarrhal croup, and we cannot detect the difference until the whispering voice begins, and the cough changes its peculiar brassy sounds to that of a husky or muffled one. This change in the voice and cough, though not always indicative, should lead us to suspect that false membrane is forming. In some cases it is neither pseudo-membranous in the beginning, nor does it commence like ordinary catarrhal croup. It has an intermediate character, the cough is rough and hoarse, resembling that of common catarrh, the voice too is hoarse. But soon the voice sinks into a whisper, the cough becomes husky, followed by a whistling sound in inspiration. The cough sometimes occurs in paroxysms which are often frequent though sometimes at distant intervals. At length there is difficulty of breathing, the voice is now whispering or quite extinct, and attempts

to speak often bring on paroxysms of cough, attended with pain in the throat or chest, great dyspnea, restlessness anxiety, and threatening suffocation. These symptoms are always present, though they may relax for a time, but return as violent, or even with more violence, from the slightest cause and sometimes without any apparent cause. They are always attended with fever and if the inflammation is very extensive the fever will be very high, the pulse is in all cases frequent, the respiration quickened and the patient is disposed to sleep in the intervals of the paroxysms.— If the case run to a disposed to terminate favorably the cough instead of becoming perfectly dry and tight, sounds loose and broken as if there was liquid in the bronchia. If the patient is old enough to expectorate, some thick mucus either transparent or opague is coughed up and occasionally flakes or tubes of false membrane are thrown

up especially after the action of powerful e-
metics. In some cases great relief is given
by the discharge of false membrane, and the
symptoms are gradually or even suddenly a-
meliorated, and the patient recovers, though
the voice is more or less suppressed for
sometime. In other cases however, the symp-
toms return with renewed vide fig. the false mem-
brane is again formed and the patient passes
into the last stage of the disease — The symp-
toms of the last stage occasionally come on early,
sometimes within twenty four hours from the
commencement of the attack, but more fre-
quently they are postponed for three or four
days and sometimes longer. In this stage there
is extreme dyspnoea, a total suppression of
voice, the cough though infrequent is perfectly
dry and light, and inspiration is wheezing
and noisy. The patient uses very great efforts to
expand the chest, the shoulders rise, the

nostrils dilate and contract, the head is thrown backward, and the intercostal spaces appear to be pressed inward by the weight of the air, which finds its ordinary entrance closed against it. The child appears to suffer extremely he throws himself about in bed, and his countenance bears an extremely anxious and alarmed expression. At length alas, the system fails, the pulse becomes very quick and feeble, the skin ~~and~~ backed in sweat, the lips livid, and drowsiness or stupor comes on. The patient gradually sinks, or convulsions come on and soon the little sufferer is gone to a happier world. Not unfrequently death takes place at an earlier stage, from suffocation during a paroxysm. Recoveries like Angel's visits are few and far between in the last stage of the disease.—

Anatomical Characters— We always find false membrane upon the mucous membrane of the air passages. It is sometimes confined

to the glottis, sometimes to the whole interior of the larynx, and frequently it extends throughout the trachea, and into the bronchial tubes occasionally even to their minute ramifications. The false membrane is in some cases thin and delicate, but more frequently is thick, opaque, and of a white or yellowish white appearance. It is thought by some to be capable of becoming organized, but it generally shows no signs of organization. From its close analogy to the fibrine of the blood and to the exudation thrown out upon serous surfaces, we might be led to suppose it was susceptible of organization. But this question is adhuc sub judice. When the deposit is removed we seldom find marks of severe inflammation upon the mucous membrane beneath it, it is generally reddened sometimes inflamed, and very rarely thickened. We not unfrequently see signs of pneumonia and of emphysema of the lungs - - - - - - - -

Treatment— This differs in no respect from that already mentioned for Catarrhal croup, in the forming stage, when we are yet uncertain as to the nature of the secretion. But so soon as we discover that the fauces are becoming covered with a coating of false membrane we should have recourse to other means. In treating this form of croup, the indications are first to prevent the further formation of false membrane, to effect the dissolution or separation and to favour the expulsion of that already formed. To meet the first indications, after the more violent inflammatory excitement has been moderated by bleeding, the most effectual remedy is to bring the system as speedily as possible under the influence of mercury. This modifies the peculiar nature of the inflammation and consequently the secretion more than any other known remedy. At first it will be necessary to administer a

purgative dose of Calomel, from four to six grains to a child two or three years old, and then to follow this with small doses, a half grain or a grain every half hour or hour combined if it may be with minute doses of the powder of opium and ipecac. It is not apt to produce ptyalism in very young children, but if it should, so soon as we discover any such effect, the remedy should be suspended, it should be employed with great caution in children of feeble health or of a strumous habit — Mercury not only modifies the character of the inflammation and secretion, but by causing a liquid secretion, favours the separation and possibly the solution of that already existing —, and thus meets a second indication. It is said even to promote the absorption of the adhering exudation — — — — — — —

The alkalies have been highly spoken of, and strongly recommended by some writers to

meet the same indications. They are thought to dispose, like Mercury to mucus rather than to fibrinous secretion, and also to dissolve the secreted membrane, as they are known to do out of the body. The sulphuret of potassium once enjoyed a great reputation, but has since fallen into neglect. The carbonates of potassa soda, and Ammonia are also spoken of. Expectorant medicines should be early given along with the mercurial to promote the loosening of the false membrane. Tartar emetic and senaka are the most efficient of these, pushed as far as the strength of the patient will permit. To meet the last indication, that is, to favour the expulsion of the membrane, Emetics are the most effectual remedies. When the strength of the patient is considerable, and the inflammation of a high grade, tartar Emetic should be prefered. But in the advanced stage, when the strength has given to

pul. sulphate of Copper would be better. It is thought to exercise a beneficial effect, as an alterative, independently of its emetic property. The dose for a child two or three years old is a half grain or a grain repeated every fifteen or twenty minutes until it produces vomiting, and then one fourth of a grain may be given every two hours. Alum is strongly recommended by Dr. Meigs as an emetic in croup, one teaspoonful of the powder to be given every ten or fifteen minutes until it operates, but he says it is rarely necessary to give a second dose. A great advantage in using alum is, that the emetic effect may be obtained several times a day without exhausting the patient. Give only hope in the last stage when the strength has become exhausted rely upon stimulants, to support the strength in hope that the false membrane may be spontaneously loosened and discharged. The remedies used are the carbonate

of ammonia, nine drops to nine drops with spirituous fomentations externally. To quiet the extreme agitation of the patient, antispasmodics and anodynes, such as assafoetida and opium should be given. As a last resort the operation of Tracheotomy may be employed. Of the operation I have little to say, it may and has no doubt saved life in some few instances, but when taken as a dernier resort, it is in my opinion a very doubtful one. Now gentlemen I have finished the task which it was my duty to perform, and knowing as I do to whose inspection it will be submitted, feel that it is but poorly accomplished, but hope that it will at least be accepted.

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